

NEW APPLICATION
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BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE
APPLICATION OF BLACK MOUNTAIN
SEWER CORPORATION, AN ARIZONA
CORPORATION, FOR A
DETERMINATION OF THE FAIR
VALUE OF ITS UTILITY PLANT AND
PROPERTY AND FOR INCREASES IN
ITS RATES AND CHARGES FOR
UTILITY SERVICE BASED THEREON.

DOCKET NO: SW-02361A-08-_____

APPLICATION

SW-02361A-08-0609

Black Mountain Sewer Corporation, an Arizona public service corporation ("BMSC" or "the Company"), hereby applies for an order establishing the fair value of its plant and property used for the provision of public wastewater utility service and, based on such finding, approving permanent rates and charges for utility service designed to produce a fair return thereon. In support thereof, BMSC states as follows:

1. BMSC is a public service corporation engaged in providing wastewater utility services in portions of Maricopa County, Arizona, pursuant to certificates of convenience and necessity granted by the Arizona Corporation Commission. At the present time, the Company provides wastewater utility service to roughly 2100 customers.

2. BMSC's business office is located at 12725 W. Indian School Road, Suite D-101, Avondale, Arizona 85392 and its telephone number is (623) 298-3753. The Company's primary management contact is Greg Sorensen. Mr. Sorensen is employed by Algonquin Water Services ("AWS") as Director of Operations for the Western Group. The Company also has an operations office located in Carefree, Arizona.

1 3. The persons responsible for overseeing and directing the conduct of this rate
2 application are Greg Sorensen and the Company's rate case consultant, Mr. Thomas
3 Bourassa. Mr. Sorensen's mailing address is 12725 W. Indian School Road, Suite D-101,
4 Avondale, Arizona 85392 and his telephone number is (623) 298-3753; his telecopier
5 number is (623) 935-1020, and his e-mail address is
6 Greg.Sorensen@algonquinwater.com. Mr. Bourassa's mailing address is 139 W. Wood
7 Drive, Phoenix, Arizona 85029, his telephone number is (602) 246-7150; his telecopier
8 number is (602) 246-1040, and his e-mail address is tjb114@cox.net. **All discovery, data**
9 **requests and other requests for information concerning this Application should be**
10 **directed to Mr. Sorensen, including copies by e-mail, as well as to Gerald Tremblay**
11 **by email at Gerald.Tremblay@algonquinpower.com, and to Mr. Bourassa, with a**
12 **copy to undersigned counsel for the Company, including by e-mail to**
13 **jshapiro@fclaw.com.**

14 4. The Company's present rates and charges for utility service were approved
15 by the Commission in Decision No. 69164 (December 5, 2006) using a test year ending
16 December 31, 2004. There have been no other changes to the Company's rates since the
17 current rates went into effect on or after December 5, 2006.

18 5. BMSC maintains that revenues from its utility operations are presently
19 inadequate to provide the Company a fair rate of return on the fair value of its utility plant
20 and property devoted to public service. BMSC's costs of providing service as well as its
21 rate base have increased substantially since the previous rate proceeding, and the
22 Company has been required to add and replace significant components of its wastewater
23 system in order to ensure continued safe and reliable utility service to its customers.
24 These increases since the test year in the prior rate proceeding have caused the revenues
25 produced by the current rates and charges for service to become inadequate to meet
26 operating expenses and provide a reasonable rate of return. Therefore, the Company

1 requests that certain adjustments to its rates and charges for utility service be approved by
2 the Commission so that the Company may recover its operating expenses and earn a just
3 and reasonable rate of return on the fair value of its property. The Company agrees to use
4 its original cost rate base as its fair value rate base in this proceeding to minimize disputes
5 and reduce rate case expense.

6 6. Filed concurrently herewith are the schedules required pursuant to A.A.C.
7 R14-2-103 for rate applications by Class "B" utilities, with the exception of the schedules
8 labeled "G" (cost of service analysis). The test year utilized by the Company in
9 connection with the preparation of such schedules is the 12-month period that ended June
10 30, 2008. The Company requests that the Commission utilize such test year in connection
11 with this Application, with appropriate adjustments to obtain a normal or more realistic
12 relationship between revenues, expenses and rate base during the period in which the rates
13 established in this proceeding are in effect.

14 7. During the test year, the Company's adjusted gross revenues were
15 \$1,580,170 from wastewater utility service. The adjusted operating income from
16 wastewater service was a loss of \$(84,485). The adjusted fair value rate base was
17 \$3,723,245. Thus, the rate of return on the Company's wastewater operations during the
18 test year was a negative 2.27% percent. The Company submits that these rates of return
19 are inadequate to allow it to obtain debt, pay a reasonable dividend to its stockholders,
20 maintain a sound credit rating, and/or enable BMSC to attract additional capital on
21 reasonable and acceptable terms in order to continue the investment in utility plant
22 necessary to adequately serve customers.

23 8. The Company is requesting an increase in revenues equal to \$913,762, an
24 increase in revenues of 57.83%. The adjustments to the Company's rates and charges that
25 are proposed herein, when fully implemented, will produce a rate of return on the fair
26 value rate base equal to 12.8% from wastewater operations.

1 9. Filed concurrently in support of this Application is the Direct Testimony of
2 Greg Sorensen, providing an overview of the Company and discussing the Company's
3 improvements since the last rate decision, including improvements made in compliance
4 with the Commission's order. Also filed is the Direct Testimony of Thomas Bourassa, in
5 two separate volumes that collectively provide an overview of the Company's rate filing,
6 discussion of the revenue requirement, including the "A" through "F" schedules,
7 development of the rate base and income statement adjustments, cost of equity capital and
8 related issues, proposed rates, including the "H" schedules, and discussion of the effects
9 of the proposed rates on customers' bills.

10 10. The Company is also requesting a new hook-up fee tariff and a new
11 pretreatment tariff as further discussed in the accompanying testimony of Mr. Sorensen
12 and Mr. Bourassa.

13 WHEREFORE, BMSC requests the following relief:

14 A. That the Commission, upon proper notice and at the earliest possible time,
15 conduct a hearing in accordance with A.R.S. § 40-251 and determine the fair value of
16 BMSC's utility plant and property devoted to providing wastewater utility service;

17 B. Based upon such determination, that the Commission approve permanent
18 adjustments to the rates and charges for utility service provided by BMSC, as proposed by
19 the Company herein, or approve such other rates and charges as will produce a just and
20 reasonable rate of return on the fair value of the Company's utility plant and property; and

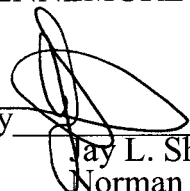
21 C. That the Commission authorize such other and further relief as may be
22 appropriate to ensure that BMSC has an opportunity to earn a just and reasonable return
23 on the fair value of their utility plant and property and as may otherwise be required under
24 Arizona law.

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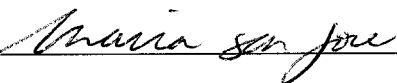
RESPECTFULLY SUBMITTED this 19th day of December, 2008.

FENNEMORE CRAIG, P.C.

By  _____
Jay L. Shapiro
Norman D. James
3003 North Central Avenue
Suite 2600
Phoenix, Arizona 85012
Attorneys for Black Mountain
Sewer Company.

ORIGINAL and thirteen (13) copies of the
foregoing, together with the direct testimonies
and schedules supporting
this application, were delivered
this 19th day of December, 2008, to:

Docket Control
Arizona Corporation Commission
1200 W. Washington St.
Phoenix, AZ 85007

By:  _____

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1 FENNEMORE CRAIG, P.C.
2 Jay L. Shapiro (No. 014650)
3 Norman D. James (No. 006901)
4 3003 N. Central Ave., Suite 2600
5 Phoenix, Arizona 85012
6 Attorneys for Black Mountain Sewer Corporation

7
8 **BEFORE THE ARIZONA CORPORATION COMMISSION**

9 IN THE MATTER OF THE
10 APPLICATION OF BLACK
11 MOUNTAIN SEWER CORPORATION,
12 AN ARIZONA CORPORATION, FOR A
13 DETERMINATION OF THE FAIR
14 VALUE OF ITS UTILITY PLANT AND
15 PROPERTY AND FOR INCREASES IN
16 ITS RATES AND CHARGES FOR
17 UTILITY SERVICE BASED THEREON.

DOCKET NO: SW-02361A-08-_____

18 **DIRECT TESTIMONY OF**
19 **GREG SORENSEN**

20 **December 19, 2008**

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1 **I. INTRODUCTION AND PURPOSE OF TESTIMONY.**

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 A. My name is Greg Sorensen. My business address is 12725 W. Indian School Road,
4 Suite D-101, Avondale, AZ 85392.

5 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?**

6 A. On behalf of the Applicant Black Mountain Sewer Corporation ("BMSC" or
7 "Company").

8 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

9 A. I am employed by Algonquin Water Services ("AWS") as Director of Operations
10 for the Western Group. AWS is an affiliate, through common ownership, of
11 BMSC and BMSC's parent, Algonquin Water Resources of America, which is
12 ultimately owned by the Algonquin Power Income Fund.

13 **Q. PLEASE SUMMARIZE YOUR RESPONSIBILITIES IN THESE**
14 **POSITIONS?**

15 A. I oversee the operations and business management functions for AWRA's utility
16 holdings in Arizona. AWS manages and operates 17 utilities in Arizona, Texas,
17 Missouri, and Illinois and operates several others. I have the responsibility for the
18 daily operations of all the Arizona utilities, for the financial operating results for
19 each utility, for capital and operating cost budgeting, for rate case planning and
20 oversight and rate setting policies and procedures as they relate to the operations
21 under my responsibility.

22 **Q. WHAT IS YOUR EDUCATIONAL AND EMPLOYMENT BACKGROUND**
23 **BEFORE GOING TO WORK FOR AWS?**

24 A. I received a Bachelor's degree in Accounting from Wake Forest University in
25 1993. I worked for Arthur Andersen as a staff and senior auditor for 5 years, after
26 which I was a Director of Financial Reporting & Analysis, Controller, and VP

1 Finance for Excel Agent Services, an international call center company. I am a
2 Certified Public Accountant in the State of Georgia (license # CPA017709). I have
3 worked for AWS since November 2005 in the capacity of Controller and Director
4 of Operations.

5 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE COMMISSION?**

6 A. Yes, I have testified in Commission proceedings involving Litchfield Park Service
7 Company (LPSCO), Gold Canyon Sewer Company, and Northern Sunrise and
8 Southern Sunrise water companies. These aforementioned entities are all affiliates
9 of BMSC.

10 **Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?**

11 A. To support BMSC's application for rate relief. Specifically, I will provide
12 background on the Company and its operations. I will also discuss the recent
13 improvements to BMSC's wastewater treatment facilities. Finally, I will address
14 certain aspects of the relief being requested in this case.

15 **II. SUMMARY OF SIGNIFICANT SYSTEM IMPROVEMENTS SINCE THE**
16 **LAST TEST YEAR.**

17 **Q. WHAT IMPROVEMENTS HAS BMSC MADE SINCE ITS LAST TEST**
18 **YEAR ENDED ON DECEMBER 31, 2004?**

19 A. In our last rate case, the Commission ordered BMSC to undertake remedial
20 measures to address odors and odor complaints within the service territory.
21 Decision No. 69164 (December 5, 2006) at 42-43. Two specific remedial projects
22 were discussed in the Commission Order—the CIE Lift Station and odor control
23 measures for one or more collection mains in the Boulders community. *Id.* As
24 reflected in BMSC's numerous compliance filings, we have achieved compliance
25 with these orders.

1 Q. HOW DID BMSC ADDRESS THESE ODOR CONCERNS AND WHAT
2 IMPROVEMENTS WERE MADE IN COMPLIANCE WITH DECISION
3 NO. 69164?

4 A. In Decision No. 69164, we were ordered to remove the CIE lift station. This
5 removal was completed on or around May 31, 2007. The project eliminated the
6 odors in that area that were the source of many customer complaints over the years.
7 However, the removal of this lift station necessitated other related projects to allow
8 the continued collection and transmission of sewage to the wastewater treatment
9 plant. First, a bypass of new sewer lines had to be constructed to convey the
10 sewage. Since a new subdivision was being developed to the west of the Carefree
11 Inn Estates subdivision, the Company was able to work with that developer and
12 accelerate his construction timing so our new lines could tie into his. This effort
13 allowed the Company to only lay an additional 440 feet of line as a bypass, instead
14 of the approximate 1,400 feet it would have otherwise taken to go around his
15 development. This saved the Company and its ratepayers an estimated \$80,000.

16 Also, the system was originally designed to have the sewage pumped from
17 the Commercial Lift Station to the CIE Lift Station, and then to the high point in
18 the collection system at Boulders Drive. However, in removing the CIE Lift
19 Station, the Commercial Lift Station had to be upgraded to safely and adequately
20 pump the flow to Boulders Drive. This necessitated higher pressure pumps,
21 modifications to the electrical service, and a new standby generator so that the
22 Commercial Lift Station would be in compliance with current Maricopa County
23 Code for electrical redundancy. During much of this work and over the course of
24 four months, temporary pumps were utilized to allow continuous pumping of
25 sewage.

26

1 **Q. WHAT ABOUT THE ODOR CONTROL MEASURES THAT WERE**
2 **ORDERED?**

3 A. Decision No. 69164 required BMSC to follow one of two of the Town of
4 Carefree's recommendations to mitigate the odor problems that existed in the
5 Boulders community. We referred to this as the Boulders Drive odor issue, as this
6 street was the primary area of odor complaints by our customers and in testimony
7 before the Commission. The Town's two recommended courses of action were to
8 either replace the gravity flow lines with force mains, or install fans and carbon
9 filters to create a negative pressure filtration system within the sewer lines. The
10 Company's consultants concluded that neither of these two recommendations was
11 practical. The first would have required a total reconstruction of the sewer system
12 under Boulders Drive, including equipping each and every connection with its own
13 pump and force main to feed into the main pressure line. Additionally, our
14 consultants concluded that during periods of light flow, septic conditions could
15 likely occur within the lines causing additional odors and defeating the purpose of
16 the entire project.

17 The second proposed solution was determined to not be practical. While
18 correctly assuming that creating negative pressure in the collection system would
19 help contain odors, it was concluded that a single fan and carbon filter station
20 would be ineffective. The concept would instead require fans and filters to be
21 installed at four separate locations. This would have resulted in significant capital
22 and ongoing operations and maintenance costs.

23 **Q. SO WHAT DID BMSC DO?**

24 A. Our consultants' alternative recommendation, which was unanimously accepted by
25 all the parties, was to install air-jumper pipelines between the manholes up and
26 downstream of the surcharging locations. This pipeline allows the air to flow with

1 the sewage and stop it from being pushed into the atmosphere. These air-jumper
2 pipelines were installed between manholes at four locations along Boulders Drive,
3 thus directing the odorous air to flow to the plant, where it was treated.

4 Then, while performing the Boulders Drive project, it was brought to the
5 Company's attention that neighboring Quartz Valley Court homes were also
6 experiencing odor issues emanating from our collection system. BMSC fully
7 investigated the complaints and found them to be valid. BMSC commissioned a
8 topographical survey that revealed that the sewer lines along Quartz Valley Court
9 had a negative slope, draining back toward the homes. Further investigation
10 showed that when the sewer system was built the line was not put as deep as
11 required at that location. Additionally, Quartz Valley Court's sewer lines were
12 routed to a junction manhole that also intercepted flow from all of Boulders Drive
13 causing that junction manhole and Quartz Valley Court lines to be continuously
14 surcharged, except perhaps during periods of very low flows. That junction
15 manhole was found to be the source of the odors about which the residents were
16 complaining.

17 **Q. HOW WAS THIS REMEDIED?**

18 A. A new sewer line and grinder pump station were constructed to permit sewage
19 from Quartz Valley Court to flow freely. The depth and location of the new
20 grinder pump station were determined based on a seismic refractive survey that
21 determined the depth and hardness of the subsurface rock, significantly reducing
22 construction costs.

23 **Q. HAS BMSC BEEN SUCCESSFUL IN MINIMIZING ODORS AND NOISE**
24 **FROM ITS OPERATIONS?**

25 A. Overall, I believe the odor reduction projects have been a success. This CIE Lift
26 Station removal and sewer line re-routing project went very well. I do not recall a

1 single odor or noise complaint from the surrounding neighbors since this project
2 was completed in 2007, following some minor commissioning issues. The
3 Boulders Drive, and resulting Quartz Valley Court, sewer line projects have had a
4 very positive reduction on the odors detected in the areas leading to the sewer plant
5 within the Boulders subdivision.

6 BMSC undertook several projects in an effort to further reduce fugitive odor
7 emissions from the treatment plant itself. We purchased, reconditioned and
8 installed an odor scrubber from an affiliate, LPSCO, which draws air from the
9 influent lift station and scrubs it prior to discharge. The process has been a very
10 successful and cost efficient solution. Additionally, we have placed heavy rubber
11 mats over grate openings which cover the treatment basins, and installed air
12 louvers to seal off the headworks, both of which reduce fugitive odors escaping
13 from these locations. Additionally, at the request of the Boulders HOA, and after
14 discussions with neighbors in the immediate area of the plant, we commissioned a
15 noise study aimed at determining the source of certain noises that were alleged to
16 be emanating from the plant during evenings and early morning hours. Based on
17 this third party study, several projects aimed at reducing plant generated noise were
18 implemented and all resulted in positive results.

19 **Q. BUT THE ODORS HAVE NOT BEEN FULLY ELIMINATED?**

20 A. While there has been significant progress in reducing fugitive odors and noise both
21 at the plant and throughout the collection system, the plant and collection system
22 are fairly old, and there continue to be occasional minor odors events. The
23 Company continues to meet regularly with Town of Carefree officials and
24 representatives from the Boulders HOA and other local community representatives
25 in an effort to maintain effective communications and timely address concerns.
26 BMSC responds quickly to all reports of odors. We have worked with the Town of

1 Carefree and City of Scottsdale to enforce commercial grease trap cleaning
2 requirements and to implement a fats, oils, and grease disposal program to reduce
3 sewer dumping of these wastes. These have greatly reduced the amount of odor-
4 causing grease buildup within the collection system.

5 Additionally, we have investigated and tested the addition of various
6 chemical additives into our collection system aimed at reducing odors in the sewer
7 lines. We tested and had some initial success with Thioguard. We have now
8 moved to injecting CBA (calcium hypochlorite) at our lift stations, also with very
9 positive results. While still not perfect, we have a much better plant, collection
10 system, and community relationships than we did just a few years ago. I believe all
11 stakeholders will attest to that.

12 **Q. IS BMSC MONITORING FOR ODORS?**

13 A. Yes. The Company installed four Odor Loggers at the plant in May 2008 to detect,
14 measure and record hydrogen sulfide (H₂S) levels. H₂S is the primary cause of
15 offensive odors and is also an easily detected and measured indicator that signals
16 the possible presence of other odiferous gases. Since installation of the devices,
17 there have only been two notable odor events recorded, both of which were
18 concurrent with maintenance work on the plant's aeration system. Each of these
19 lasted for only a short period of time. Finally, since the conclusion of the
20 Company's last rate case in December 2006, BMSC has had only one inspection by
21 MCESD, as these are usually triggered by complaints. That inspection noted only
22 one minor deficiency and indicated no NOVs. The noted minor deficiency was a
23 signage issue where the requirement to show the owner's emergency contact
24 information was deemed inadequate. This was promptly corrected.

1 **Q. HAVE THERE BEEN OTHER SIGNIFICANT IMPROVEMENTS TO THE**
2 **SYSTEM?**

3 A. Yes. We acquired an additional 81,049 gallons per day (gpd) of treatment capacity
4 from the City of Scottsdale at a cost of \$486,294.

5 **Q. WHY DID BMSC NEED ADDITIONAL TREATMENT CAPACITY?**

6 A. In January, February, and March of 2005, we experienced high flow levels in our
7 collection system, which were in turn directed to the City of Scottsdale. Average
8 daily flows directed to the City of Scottsdale for treatment during those months
9 were approximately 382,000, 678,000, and 433,000 gpd, respectively. As of that
10 time, we had purchased only 318,951 gpd of treatment capacity from the City. The
11 City of Scottsdale, per our agreement with them, had the right to require us to
12 purchase additional capacity to cover the higher flows. The City demanded that we
13 purchase an additional 181,049 gpd at a cost of approximately \$1.1 million.

14 **Q. THAT IS A LOT MORE THAN WHAT BMSC PAID FOR ADDITIONAL**
15 **CAPACITY. WHAT HAPPENED?**

16 A. We performed a collection system infiltration analysis to determine sources of
17 believed significant infiltration. As a result of this analysis, approximately 3,100
18 feet of slip-lining of particularly bad portions of our collection system was
19 performed. We also repaired some cracks in manholes, which reduced H2S
20 emissions from the collection system. The combined cost of the analysis and
21 resulting project was approximately \$135,000. After discussing this with the City
22 of Scottsdale, they agreed to reduce the additional capacity amount by 100,000
23 gpd, thus saving the Company, and in turn our ratepayers, \$600,000. We now have
24 400,000 gpd of purchased capacity, which is in my opinion used and useful in the
25 provision of service to our existing customers.

26

1 **Q. HAVE THERE BEEN ANY OTHER SIGNIFICANT PROJECTS SINCE**
2 **THE LAST TEST YEAR?**

3 A. Yes. In the late summer of 2007, we experienced an electrical system failure at our
4 Indian Rock Lift Station, which in turn caused failure of the pumping equipment.
5 To improve the reliability of the facility, (1) new submersible Flygt pumps were
6 installed on stainless steel guide rails to permit rapid removal and eliminate
7 confined space entry issues, (2) the electrical system was brought up to current
8 standards including replacement of the electrical panel, (3) a digital auto-dialer
9 alarm was installed to alert operators of developing problems, and (4) new
10 discharge valves and piping were installed. This improved the overall reliability
11 and maintainability of the lift station. During this rehabilitation process, sewage
12 had to be intercepted and bypassed so contractors could safely work within the lift
13 station. This project's total cost was approximately \$195,000 and was completed
14 in the spring of 2008.

15 **Q. ARE THERE INCREASED OPERATING EXPENSES ASSOCIATED**
16 **WITH THESE PLANT IMPROVEMENTS?**

17 A. We don't know yet. There is certainly maintenance of the new generator required
18 at the Commercial Lift Station, which was necessitated by the CIE project ordered
19 by the Commission. There will be costs associated with replacing the carbon in the
20 odor scrubber obtained from LPSCO in June 2008, which aren't reflected in the
21 test year since a carbon change-out didn't occur in that time period. For now, to
22 the best of my knowledge, all other material operating expenses incurred in relation
23 to these plant improvements are reflected in the Company's test year operating
24 expenses.

1 **Q. HOW MUCH OF THE RATE INCREASE SOUGHT IN THIS**
2 **APPLICATION RESULTS FROM THESE SIGNIFICANT PLANT**
3 **IMPROVEMENTS?**

4 A. The CIE project and Boulders Drive projects, as ordered by the Commission, cost
5 \$686,000 and \$319,000, respectively and result in an approximate 21.7% increase,
6 or \$9.90 per month for a residential customer. The Quartz Drive Odor project cost
7 \$220,000 and results in an approximate 4.8% increase, or \$2.18 per month for a
8 residential customer. The additional capacity required to be purchased from the
9 City of Scottsdale and the infiltration/slip lining project (to reduce the amount of
10 capacity purchased) cost \$486,000 and \$135,000, respectively, and result in an
11 approximate 13.5% increase, or \$6.15 per month for a residential customer.
12 Finally, the Indian Rock Lift Station rehabilitation and upgrade cost \$195,000 and
13 results in an approximate 4.3% increase, or \$1.95 per month for a residential
14 customer. In aggregate, the above projects cost \$2,041,000 and will increase a
15 residential customer's monthly bill by 44.3%, or \$20.18.

16 **III. MISCELLANEOUS ISSUES.**

17 **Q. YOU MENTIONED IMPROVED RELATIONS WITH CUSTOMERS AND**
18 **THE TOWN. PLEASE EXPLAIN FURTHER.**

19 A. During the process of the last rate case, it became very apparent to Bob Dodds and
20 me that we, as a Company, had failed to achieve a proper level of communication
21 with our customers, neighbors, and the community as a whole. Since that time, I
22 believe we have become a much more responsive service provider. We have a
23 better understanding of our customers' needs and concerns, as a result of their
24 heightened awareness of odor and noise issues. We now hold meetings at least
25 every other month with members of the Boulders HOA, and Town of Carefree
26 officials including the Mayor, Town Administrator, and sometimes, a member of

1 the Town Council. Bob Dodds or I attend these meetings, along with Charlie
2 Hernandez, Dan Schanaman, and usually at least one of our operators.

3 These meetings are an opportunity for the parties to express concerns,
4 address questions, provide feedback, and offer suggestions for improvement. We
5 have an opportunity at these meetings to communicate upcoming projects which
6 may affect the Town or our customers, or we can communicate what we are doing
7 to reduce odor or noise within our system. So, the level of communication has
8 increased greatly over the past couple of years, and I believe the Company is well
9 on its way to being a good community member and a partner with its customers
10 and the Town.

11 **Q. WHAT IS BMSC'S COMPLIANCE STATUS?**

12 A. To the best of our knowledge, we are currently in total compliance with the
13 requirements of the Commission, ADEQ and Maricopa County. Since the last rate
14 case, we had one incident of note.

15 On November 13, 2007, we had a spill at our Commercial Lift Station. This
16 spill was caused initially by an APS power failure, losing one phase on the three
17 phase system. The phasing caused the main pump motor to burn out, which in turn
18 led to the lift station and manhole overflowing. The wetwell overflowed into the
19 dry well, flooding the electrical panel and controls, so the secondary pump would
20 not come on as programmed. The call-out alarm did not work as the phone signals
21 had been changed from analog to digital without notification, but the device was
22 analog.

23 The next day, the lead operator discovered the situation and began control,
24 notification, and clean-up efforts immediately. We notified both ADEQ and
25 MCESD as required. We also notified Commission Staff as a courtesy. A spill
26 report was issued to ADEQ and MCESD, who are the authoritative entities on this

1 matter. No Notice of Violation (NOV) was issued as the incident was properly
2 handled. Representatives from the ACC and MCESD also inspected the situation,
3 and issued no report. Regrettably, however, during our internal investigation of the
4 matter, it was discovered that an operator should have done his inspection rounds
5 on the day of the initial incident, but didn't inspect the lift station. While this may
6 not have prevented the spill, it would have detected the spill earlier. This employee
7 was terminated.

8 **Q. CAN MORE INCIDENTS LIKE THIS BE EXPECTED?**

9 A. While the Company has made great strides in improving the collection system, the
10 treatment plant, and its community relationships, this is an active sewer system and
11 occasionally, as with any active sewer system, there are upsets in the process. But
12 we will continue to make every reasonable effort to minimize the impact of our
13 system on the community it serves.

14 **Q. ARE THERE ANY OTHER MATTERS YOU WOULD LIKE TO DISCUSS?**

15 A. Yes. Currently, the Company does not have a Pretreatment tariff. These tariffs
16 better allow the Company to regulate and maintain the quality of influent within its
17 CC&N. The tariff, as proposed, would greatly assist us in our fats, oils and grease
18 (FOG) program, which in turn reduces sewer line plugs and odors, which benefits
19 the community. Additionally, improving the quality of influent could reduce the
20 BOD of the sewage which we bypass to the City of Scottsdale for treatment. One
21 component of the price the City of Scottsdale charges is based on BOD levels in
22 the influent. A reduction in influent BOD could lead to reduced costs to the
23 Company, and in turn the ratepayers. The Company is requesting a Pretreatment
24 Tariff be authorized in this case, in a similar form to the one recently proposed for
25 LPSCO, and a copy of this proposed tariff is attached to my testimony as Exhibit 1.
26

1 Additionally, the Company is also requesting approval for a new hook-up
2 fee or HUF tariff.

3 **Q. ARE THERE ANY OTHER PROPOSED ADJUSTMENTS TO YOUR**
4 **TARIFF?**

5 A. Yes. During the Company's last rate case, it was decided that the Company did not
6 need a Hook-up Fee (HUF). Since that time, the Company has become very aware
7 of the Commission's desire that "growth pay for growth," and realized that the
8 reinstatement of a HUF would be proper to help further that goal and reduce the
9 burden upon our existing customers. Future treatment capacity requirements must
10 be either purchased from the City of Scottsdale, or a new plant will need to be
11 constructed before 2016 when our current capacity agreement with the City
12 expires. This capacity could be very expensive, and we believe a portion of that
13 burden should be borne by new development. Mr. Bourassa will address the
14 details of the proposed HUF in his direct testimony.

15 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

16 A. Yes.
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Black Mountain Sewer Corporation Application

Direct Testimony Of Greg Sorensen

Exhibit 1

BLACK MOUNTAIN SEWER CORPORATION

PRETREATMENT STANDARDS TARIFF

EXECUTIVE SUMMARY

Black Mountain Sewer Corporation ("BMSC" or "Company") hereby declares that the following Code of Practice has been prepared and adopted to provide for pretreatment standards in the maintenance and operation of wastewater treatment at the Company's Palm Valley Wastewater Treatment Facility ("WWTF"). This Code of Practice shall be filed with the Arizona Corporation Commission and made part of BMSC's Wastewater Service Tariff, Part Four, Section I.B [Waste Limitations].

BMSC hereby expressly reserves the right to make any lawful addition and/or revisions in this Code of Practice when and as they may become advisable to properly manage the WWTF and to promote the peace, health, safety and welfare of the customers that will be served. This Code of Practice is supplementary to, and are not to be construed as, any abridgement of any lawful rights of the Company as outlined in the Arizona Revised Statutes governing Public Utilities (Title 40) and the Arizona Administrative Corporation Commission Rules on Sewer (Title 14, Article 6), including the right to disconnect or to refuse permission to connect a customer to the Company's wastewater system for violation of this Code of Practice or any other applicable law of the State of Arizona.

This Code of Practice incorporates pretreatment standards per 40 CFR 403, A.A.C. Title 12, Article 4, and A.A.C. Title 18, Articles 9 and 11. This Code of Practice is enforceable per the authority granted to wastewater utilities established under Title 14, Chapter 2, Article 6 of the Arizona Administrative Code.

Approved: _____

Responsible Agent: Operations

BLACK MOUNTAIN SEWER CORPORATION

CODE OF PRACTICE

SECTION 1 - DEFINITIONS

A. PROHIBITED WASTE

Prohibited waste means:

1. Air Contaminant Waste

Any waste other than sanitary waste which, by itself or in combination with another substance, is capable of creating, causing or introducing an air contaminant outside any sewer or sewage facility or is capable of creating, causing or introducing an air contaminant within any sewer or sewage facility which would prevent safe entry by authorized personnel.

2. Flammable or Explosive Waste

Any waste, which by itself or in combination with another substance, is capable of causing or contributing to an explosion or supporting combustion in any sewer or sewage facility including, but not limited to gasoline, naphtha, propane, diesel, fuel oil, kerosene or alcohol.

3. Obstructive Waste

Any waste which by itself or in combination with another substance, is capable of obstructing the flow of, or interfering with, the operation or performance of any sewer or sewage facility including, but not limited to: earth, sand, sweepings, gardening or agricultural waste, ash, chemicals, paint, metal, glass, sharps, rags, cloth, tar, asphalt, cement-based products, plastic, wood, waste portions of animals, fish or fowl and solidified fat.

4. Corrosive Waste

Any waste with corrosive properties which, by itself or in combination with any other substance, may cause damage to any sewer or sewage facility or which may prevent safe entry by authorized personnel.

5. High Temperature Waste

Any waste which, by itself or in combination with another substance, will create heat in amounts which will interfere with the operation and maintenance of a sewer or sewage facility or with the treatment of waste in a sewage facility;

Any waste which will raise the temperature of waste entering any sewage facility to 40 degrees Celsius (104 degrees Fahrenheit) or more; or any non-domestic waste with a temperature of 65 degrees Celsius (150 degrees Fahrenheit) or more.

6. Biomedical Waste

Any of the following categories of biomedical waste: human anatomical waste, animal waste, untreated microbiological waste, waste sharps, medical products, and untreated human blood and body fluids known to contain viruses and agents.

7. Miscellaneous Wastes

Any waste, other than sanitary waste, which by itself or in combination with another substance:

- a. constitutes or may constitute a significant health or safety hazard to any person;
- b. may interfere with any sewer or sewage treatment process;

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-
- c. may cause a discharge from a sewage facility to contravene any requirements by or under any ADEQ or NPDES discharge permit or any other act, approved Liquid Waste Management Plan, or any other law or regulation governing the quality of the discharge, or may cause the discharge to result in a hazard to people, animals, property or vegetation;
 - d. may cause biosolid to fail criteria for beneficial land application.

B. RESTRICTED WASTE

Restricted waste means:

- 1. Specified Waste

Any waste which, at the point of discharge into a sewer, contains any contaminant at a concentration in excess of the limits set out below. All concentrations are expressed as total concentrations which includes all forms of the contaminant, whether dissolved or un-dissolved. The concentration limits apply to both grab and composite samples. Contaminant definitions and methods of analysis are outlined in standard methods.

CONVENTIONAL CONTAMINANTS [mg/L]	
Biochemical Oxygen Demand (BOD)	350
Chemical Oxygen Demand (COD)	1000
Oil and Grease*	100
Suspended Solids	350

Total oil and grease includes oil and grease (hydrocarbons) (see table (b))

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ORGANIC CONTAMINANTS [mg/L]	
Benzene	0.1
Ethyl Benzene	0.2
Toluene	0.2
Xylenes	0.2
Polynuclear Aromatic Hydrocarbons (PAH) ²	0.05
Phenols	N/A
Oil and Grease (hydrocarbons)	15

INORGANIC CONTAMINANTS [mg/L]	
Arsenic (As)	0.20
Cadmium (Cd)	0.047
Chloride (Cl)	1500
Chromium (Cr)	3.0

² Note: Polynuclear Aromatic Hydrocarbons (PAH) include:

- a. naphthalene benzo(a)anthracene
- b. acenaphthylene chrysene
- c. acenaphthene benzo(k)fluoranthene
- d. fluorene benzo(k)fluoranthene
- e. phenanthrene benzo(a)pyrene
- f. anthracene dibenzo(a,h)anthracene
- g. fluoranthene indeno(1,2,3-cd)pyrene
- h. pyrene benzo(g,h,i)perylene

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Cobalt (Co)	5
Copper (Cu)	1.5
Cyanide (CN)	1
Iron (Fe)	50
Lead (Pb)	0.41
Manganese (Mn)	5
Mercury (Hg)	0.023 mg/L
Molybdenum (Mo)	5
Nickel (Ni)	3
Selenium (Se)	0.10
Silver (Ag)	1.2
Sulfide (S)	10
Zinc (Zn)	3.5

2. Food Waste

Any non-domestic waste from cooking and handling of food that, at the point of discharge into a sewer, contains particles larger than 0.5 centimeters in any dimension.

3. Radioactive Waste

Any waste containing radioactive materials that, at the point of discharge into a sewer, exceeds radioactivity limitations as established by NRC for sewer discharges (Unity equation and other related standards).

4. pH Waste

Any non-domestic waste which, at the point of discharge into a sewer, has a pH lower than 6.0 or higher than 9.0 , or a pH less than 5.0 for discharges from Industrial customers into the Company's wastewater system, as determined by either a grab or a composite sample.

5. Dyes and Coloring Material

Dyes or coloring materials which may pass through a sewage facility and discolor the effluent from a sewage facility except where the dye is used by the Sewer Company, or one or more of its agents, as a tracer.

Approved: _____

Responsible Agent: Operations

6. Miscellaneous Restricted Wastes

Any of the following wastes:

- a. seawater
- b. PCBs
- c. chlorinated phenols¹
- d. pesticides
- e. herbicides
- f. tetrachloroethylene

¹ include:

- chlorophenol (ortho, meta, para)
- dichlorophenol (2,3, 2,4-, 2,5-, 2,6-, 3,4-, 3,5-)
- trichlorophenol (2,3,4-, 2,3,5-, 2,3,6-, 2,4,5-, 2,4,6-, 3,4,5-)
- tetrachlorophenol (2,3,4,5-, 2,3,4,6-, 2,3,5,6-)
- pentachlorophenol

Approved: _____

Responsible Agent: Operations

BLACK MOUNTAIN SEWER CORPORATION

CODE OF PRACTICE-BMSC-CP-01-004

SECTION 2 - DENTAL OPERATIONS

I. APPLICATION

This code of practice for dental operations defines mandatory requirements for managing non-domestic waste discharged directly or indirectly into a sewer connected to a sewage facility.

This code of practice applies to dental operations.

II. DISCHARGE REGULATIONS

An operator of a dental operation must not discharge waste which, at the point of discharge into a sewer, contains:

- a. prohibited waste, special waste, or storm water ; or
- b. restricted waste with the exception of mercury measured at the point of discharge from a certified amalgam separator.

An operator of a dental operation that produces liquid waste from photographic imaging containing silver shall comply with the requirements of BMSC-CP-01-004.

An operator of a dental operation that produces wastewater containing dental amalgam must either:

- a. collect and transport the wastewater from the dental operation for off-site waste management; or
- b. treat the wastewater at the dental operation site prior to discharge to the sewer using a certified amalgam separator.

An operator of a dental operation must install and maintain the amalgam separator according to the manufacturer's or supplier's recommendations in order that the amalgam separator functions correctly. Such separator must be certified for use by the manufacturer under the provisions of ISO 11 143.

An operator of a dental operation who installs an amalgam separator must ensure that:

- a. all dental operation wastewater that contains dental amalgam is treated using the amalgam separator;
- b. a monitoring point is installed at the outlet of the amalgam separator or downstream of the amalgam separator at a location upstream of any discharge of other waste;
- c. the monitoring point must be installed in such a manner that the total flow from the amalgam separator may be intercepted and sampled; and
- d. the monitoring point shall be readily and easily accessible at all times for inspection.

If the amalgam separator is located downstream of a wet vacuum system, an operator of a dental operation must ensure that:

- a. the wet vacuum system is fitted with an internal flow control fitting; or
- b. a flow control fitting is installed on the water supply line to the wet vacuum system.

The flow control fitting must be sized to limit the flow to a rate that is no more than the maximum inlet flow rate of the amalgam separator as stated by the manufacturer of the amalgam separator.

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Responsible Agent: Operations

An operator of a dental operation must locate an amalgam separator in such a manner that an accidental spill, leak or collecting container failure will not result in waste containing amalgam entering any sewer. If a location is not available, an operator of a dental operation must do one of the following:

- (a) install spill containment to contain spills or leaks from the amalgam separator; or
- (b) cap all floor drains into which liquid spilled from the amalgam separator would normally flow.

An operator of a dental operation must replace the amalgam separator's collecting container when any one of the following occurs:

- (a) the manufacturer's or supplier's recommended expiry date, as shown on the amalgam separator, has been reached; or
- (b) the warning level specified in the ISO Standard has been reached; or
- (c) analytical data obtained using a method of analysis outlined in standard methods, or an alternative method of analysis approved by the manager, having a method detection limit of 0.1 mg/L or lower, indicates that the total concentration of mercury in the discharge from the amalgam separator is greater than, or equal to, 2 mg/L.

An operator of a dental operation shall not dispose of dental amalgam collected in an amalgam separator, a collecting container, or any other device, to a sewer.

III. RECORD KEEPING AND RETENTION

An operator of a dental operation that uses an amalgam separator must keep, at the site of installation of the amalgam separator, an operation and maintenance manual containing instructions for installation, use, maintenance and service of the amalgam separator installed.

An operator of a dental operation that uses an amalgam separator must post, at the site of installation of the amalgam separator, a copy of the ISO Standard test report pertaining to the amalgam separator installed.

An operator of a dental operation that uses an amalgam separator must keep a record book at the dental operation site that includes the following information pertaining to the amalgam separator installed:

- a. date of installation of the amalgam separator and name of the installation service provider;
- b. serial number and expiry date of the amalgam separator and/or its components;
- c. maximum recommended flow rate through the amalgam separator, where applicable;
- d. dates of inspection, maintenance, cleaning and replacement of any amalgam separation equipment or components;
- e. dates and descriptions of all operational problems, spills, leaks or collecting container failures associated with the amalgam separator and remedial actions taken;
- f. name, address and telephone number of any person or company who performs any maintenance or disposal services related to the operation of the amalgam separator; and
- g. dates of pick-up of the collecting container for off-site disposal, volume of waste disposed and the location of disposal.

The records must be retained for a period of two years and must be available on request by an sewer company employee.

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Responsible Agent: Operations

BLACK MOUNTAIN SEWER CORPORATION

CODE OF PRACTICE

SECTION 3 - DRY CLEANING OPERATIONS

I. APPLICATION

This code of practice for Dry Cleaning operations defines the requirements for managing waste discharged directly or indirectly into a sewer connected to a sewage facility from dry cleaning businesses, or other facilities employing solvent or chemical cleaning routines.

Definitions are included in BMSC-CP-01-DEF.

II. DISCHARGE REGULATIONS

An operator of a dry cleaning operation must not discharge waste, which at the point of discharge into a sewer contains:

- (a) Tetrachloroethylene and Perchlomethylene is prohibited.;
- (b) Petroleum solvent in a concentration that is in excess of 15 milligrams per liter as analyzed in a grab sample; and
- (c) Prohibited waste, restricted waste, special waste, storm water, or uncontaminated water.

An operator of a dry cleaning operation that generates wastewater containing tetrachloroethylene or petroleum solvent shall either:

- (a) Collect and transport the wastewater from the dry cleaning operation for off site waste management; or
- (b) Install and maintain a solvent/water separator and holding tank in accordance with this code of practice.

All dry cleaning operations in business that generate wastewater containing tetrachloroethylene or petroleum solvent, but do not have a solvent/water separator and holding tank shall install and maintain a solvent/water separator and holding tank when any of the following occur:

- (a) The dry cleaning operation is renovated, to modify the plumbing or dry cleaning equipment;
- (b) New equipment, designed specifically for dry cleaning, is added to the dry cleaning operation; or
- (c) The discharge from the dry cleaning operation exceeds the discharge limits specified above or any of the restricted waste criteria specified in BMSC-CP-01-DEF.

Solvent Water Separators and Holding Tanks

Solvent/water separator and holding tank installations must conform to the requirements of this code of practice.

An operator of a dry cleaning operation shall not directly discharge wastewater from the solvent/water separator to a sewage facility

An operator of a dry cleaning operation must:

- (a) Collect the wastewater discharged from a solvent/water separator into a transparent, solvent-compatible, holding tank with a containment capacity 25% larger than the total volume of the solvent/water separator; and
- (b) Allow the wastewater to stand undisturbed for a period of not less than 12 hours following each operating date.

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An operator of a dry cleaning operation must check the contents of the holding tank after the specified period of time has elapsed to determine whether the wastewater contains any visible residual solvent. If there is no visible residual solvent in the holding tank, the contents may be discharged to the sewer.

If the holding tank contains any visible tetrachloroethylene or petroleum solvent after the specified period of time, then the tetrachloroethylene or petroleum solvent must be separated and returned to the solvent recovery system. After the removal of all visible solvent, the wastewater may be discharged to the sanitary sewer.

Visual Inspections

An operator of a dry cleaning operation must:

- (a) Visually inspect the solvent/water separator on a daily basis and
- (b) Clean the solvent/water separator at least once every seven (7) days to manufacturer's standards.

Spills and Leaks

An operator of a dry cleaning operation must install spill containment facilities in all chemical storage areas and around all dry cleaning machines.

An operator of a dry cleaning operation must block off all sewer drains within the containment area for chemical storage and dry cleaning equipment to prevent any accidental discharge of solvent to a sewer.

An operator of a dry cleaning operation must inspect all dry cleaning equipment for liquid leaks at least once per day.

An operator of a dry cleaning operation must keep all equipment clean to ensure that leaks are visible. The following areas and items are to be checked for leaks:

- (i) hose connections, unions, couplings and valves
- (ii) machine door gasket and seating
- (iii) filter head gasket and seating
- (iv) pumps
- (v) base tanks and storage
- (vi) solvent/water separators
- (vii) filter sludge recovery
- (viii) distillation unit
- (ix) diverter valves
- (x) saturated lint in lint baskets
- (xi) holding tanks
- (xii) cartridge filters

An operator of a dry cleaning operation who detects any liquid leak from dry cleaning equipment or chemical storage must repair the leak within 72 hours and must immediately prevent any discharge of contaminants to a sewer.

III. RECORD KEEPING AND RETENTION

Every dry cleaning operation must keep a record book on site for inspection with records from the previous two years.

The following information shall be recorded in the record book:

- (i) record of all inspections done by the operator, employees or other hired personnel;
- (ii) record of any liquid leaks detected and remedial action taken;
- (iii) record of solvent/water separator cleaning;
- (iv) record of holding tank cleaning and solvent transfer; and
- (v) record of all other equipment maintenance and repair.

Approved: _____

Responsible Agent: Operations

BLACK MOUNTAIN SEWER CORPORATION

CODE OF PRACTICE

SECTION 4 - FOOD SERVICE OPERATIONS

I. APPLICATION

This code of practice for Food Service operations defines the requirements for managing waste discharged directly or indirectly into a sewer connected to a sewage facility from restaurants, or other facilities employing food service as a primary or secondary business operation.

This code of practice applies to:

- (a) operators of a food services operation that adds kitchen equipment that discharges oil and grease;
- (b) operators of a food services operation that discharges non-domestic waste to sewer that exceeds any of the restricted waste criteria specified in BMSC-CP-O1-DEF; or
- (c) any food service operation, as determined by BMSC's wastewater operations group.

Definitions are included in BMSC-CP-01-DEF.

II. DISCHARGE REGULATIONS

An operator of a Food Service Operation must not discharge waste, which at the point of discharge into a sewer, contains:

- 1. oil and grease in a concentration that is in excess of 100 milligrams per liter as analyzed in a grab sample;
- 2. suspended solids in a concentration that is in excess of 350 milligrams per liter as analyzed in a grab sample;
- 3. 5-day biochemical oxygen demand (BOD₅) in a concentration that is in excess of 350 milligrams per liter in a grab sample;
- 4. prohibited waste, restricted waste, special waste, storm water, or uncontaminated water.

III. GREASE INTERCEPTORS

Grease interceptors are required to be installed and maintained by the Owner of food service operations within the collection system of BMSC facilities. Grease interceptor installations shall conform to the requirements of this code of practice.

Design

The rated flow capacity of each grease interceptor installed in food services establishments shall not be less than the maximum discharge flow from all plumbing fixtures connected to the grease interceptor that will discharge simultaneously.

The rated flow capacity of each grease interceptor must be established using the Uniform Plumbing Code (UPC) 2001 test as approved by the BMSC operations group.

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Each grease interceptor must have either:

1. an internal flow control fitting, or
2. a flow control fitting installed on the inlet line.²

All grease interceptors must be labeled with information containing the rated flow capacity of the unit. The label shall be permanently affixed and visible following installation. Where a permanently affixed and visible label is not possible or practical, manufacturer and installation drawings of the grease interceptor shall be maintained at the site and shall be available for inspection by an officer, on request.

Flow Rates

The operator of a food services operation must calculate the maximum discharge flow rate to a grease interceptor by adding together the flow rates from each fixture that will discharge simultaneously using the following method to estimate the flow rate from each fixture:

- (a) for sinks, calculate the total volume of each sink and assign a drain time of one minute.
- (b) for exhaust hoods with an automatic cleaning cycle, measure the discharge flow rate or use the manufacturers estimate of peak discharge flow rate during the automatic wash cycle.
- (c) for floor drains, estimate the flow rate using the following table:

Floor Drain Diameter		Drain Rate		
Millimetres	Inches	L/s	Imperial gpm	US gpm
51	2	1.4	18.3	22
76	3	2.36	31.2	37.5
102	4	2.84	37.5	45

- (d) for drains on other equipment, use the table in Section (c) or if the drain size is less than 2 inches in diameter either:
 1. measure the discharge flow rate, or
 2. refer to manufacturers estimated peak discharge flow rate, or
 3. use a minimum of 1.4L/s.
- (e) for automatic dishwashers, measure the discharge flow rate or use the maximum discharge flow rate specified by the dishwasher manufacturer.

Where the rated flow capacity of a grease interceptor is exceeded by the maximum discharge flow rate from all plumbing fixtures that will be discharged simultaneously to the grease interceptor, the operator of a food services operation must:

1. Install a grease interceptor that has a rated flow capacity equal to or greater than the maximum discharge flow rate from all plumbing fixtures connected to the grease interceptor that will discharge simultaneously; or
2. Install additional grease interceptors so that the maximum discharge flow rate from fixtures connected to each grease interceptor that will discharge simultaneously does not exceed the rated flow capacity of the grease interceptor; or

² The flow control fitting must be sized to limit the flow to a rate that is no more than the rated flow capacity of the grease interceptor.

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3. Have a plan approved by the manager showing how the discharge of waste will be managed.

Installation

A grease interceptor must be located so that it is readily and easily accessible for inspection and maintenance. A sampling point shall be installed as follows:

1. a sampling tee shall be located either at the outlet of the grease interceptor or downstream of the grease interceptor at a location upstream of any discharge of other waste;
2. the sampling tee shall be not less than 10.2 cm (4 inches) in diameter, and shall be installed so that it opens in a direction at right angles to and vertically above the flow of the sewer pipe; and
3. the sampling tee shall be readily and easily accessible at all times for inspection.

Maintenance

An operator of a food services operation shall maintain all grease interceptors installed in connection with the food services operation in accordance with the manufacturer's recommendations so that the grease interceptors function properly.

An operator of a food services operation must not permit oil and grease to accumulate in a grease interceptor in excess of the lesser of six inches or 25% of the wetted height of the grease interceptor.

An operator of a food services operation shall not dispose of oil and grease from a grease interceptor to a sewer. All cleaning or grease removal shall be accomplished by employing vacuum trucks or other means to preclude any grease from entering the collection system.

An operator of a food services operation must not use or permit the use of chemical agents, enzymes, bacteria, solvents, hot water or other agents to facilitate the passage of oil and grease through a grease interceptor without the express written consent of BMSC.

Connections to Grease Interceptors

An operator of a food services operation shall have the following fixtures connected to the grease intercept system:

- (a) sinks used for washing pots, pans, dishes, cutlery and kitchen utensils;
- (b) drains serving self-cleaning exhaust hoods installed over commercial cooking equipment;
- (c) drains serving commercial cooking equipment that discharges oil and grease;
- (d) drains serving a garbage compactor used to compact waste that may contain, or be contaminated with, food waste; or
- (e) other fixtures that discharge wastewater containing oil and grease.

The following fixtures shall not be connected to a grease interceptor:

- (a) garburators, potato peelers and similar equipment discharging solids;
- (b) toilets, urinals and hand sinks;
- (c) automatic dishwashers³

Outdoor Garbage Compactors

An owner of an outdoor garbage compactor installation connected to a sewer must install works as necessary to prevent rainwater from entering the drain connected to the sewer.

³ An automatic dishwasher may be connected to a grease interceptor provided that there are no other fixtures connected to the grease interceptor and the grease interceptor is sized to accept the maximum discharge flow rate specified by the dishwasher manufacturer.

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IV. RECORD KEEPING AND RETENTION

An operator of a food services operation must keep a record at the food services operation of all grease interceptor inspection and maintenance activities including:

- (a) the date of inspection or maintenance;
- (b) the maintenance conducted;
- (c) the type and quantity of material removed from the grease interceptor; and
- (d) the location of disposal of the material removed from the grease interceptor.

The records shall be retained for a period of two years, and shall be available on request by an officer.

Approved: _____

Responsible Agent: Operations

BLACK MOUNTAIN SEWER CORPORATION

CODE OF PRACTICE

SECTION 5 - PHOTOGRAPHIC IMAGING OPERATIONS

I. APPLICATION

This code of practice for photographic imaging operations defines mandatory requirements for managing non-domestic waste discharged directly or indirectly into a sewer connected to a sewage facility.

This code of practice applies to photographic imaging operations. Definitions are included in BMSC-CP-01-DEP.

II. DISCHARGE REGULATIONS

An operator of a photographic imaging operation must not discharge waste which, at the point of discharge into a sewer, contains:

- (a) silver in a concentration that is in excess of 5 milligrams per liter (mg/L) as analyzed in a grab sample; or,
- (b) prohibited waste, restricted waste, special waste, storm water, or uncontaminated water as defined in BMSC-CP-01-DEF, other than the following restricted wastes: BOD, COD, chloride, iron and sulfate.

An operator of a photographic imaging operation that produces liquid waste containing silver must either:

- (a) collect and transport the waste from the photographic imaging operation for off-site waste management; or
- (b) treat the waste at the photographic imaging operation site prior to discharge to the sewer using one of the following silver recovery technologies:
 - (i) two chemical recovery cartridges connected in a series;
 - (ii) an electrolytic recovery unit followed by two chemical recovery cartridges connected in series; or
 - (iii) any other silver recovery technology, or combination of technologies, capable of reducing the concentration of silver in the waste to 5 mg/L or less where valid analytical test data has been submitted to, and accepted by, the BMSC wastewater group.

An operator of a photographic imaging operation must install and maintain silver recovery technology according to the manufacturer's or supplier's recommendations.

An operator of a photographic imaging operation must collect all liquid waste containing silver in a holding tank and must deliver this waste to the chemical recovery cartridges using a metering pump.

An operator of a photographic imaging operation must calibrate the metering pump at least once per year.

Spill/Leak Prevention

An operator of a photographic imaging operation must locate the silver recovery system in such a manner that an accidental spill, leak or container failure will not result in liquid waste containing silver in concentrations greater than 5 mg/L entering any sewer.

If a location referred to above is not available, an operator of a photographic imaging operation must do one of the following:

- (a) install spill containment to contain spills or leaks from the silver recovery system; or

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- (b) cap all floor drains into which liquid spilled from the silver recovery system would normally flow.

Testing

When using two separate chemical recovery cartridges, an operator of a photographic imaging operation must test the discharge from the first cartridge for silver content at least once per month using either silver test paper or a portable silver test kit.

When the discharge from the first chemical recovery cartridge referred to above cannot be sampled, an operator of a photographic imaging operation must:

- (a) install a cumulative flow meter on the silver recovery system; and
- (b) test the discharge from the second chemical recovery cartridge once per week using silver test paper or a silver test kit.

Cartridge Replacement

An operator of a photographic imaging operation must replace the chemical recovery cartridges when any one of the following occurs:⁴

- (a) the manufacturer's or supplier's recommended expiry date, as shown on each cartridge, has been reached;
- (b) eighty percent (80%) of the manufacturer's or supplier's maximum recommended capacity, or total cumulative flow, for each cartridge has been reached;
- (c) test data, using silver test paper or a silver test kit, indicates that the discharge from the first cartridge is greater than 1000 mg/L; or
- (d) analytical data using a method of analysis outlined in standard methods, or an alternative method of analysis approved by the manager, having a method detection limit of 0.5 mg/L silver or lower, indicates that the concentration of silver in the discharge from the silver recovery system is greater than, or equal to, 5 mg/L.

III. RECORD KEEPING AND RETENTION

An operator of a photographic imaging operation that uses a silver recovery system must keep, at the photographic imaging operation site, an operation and maintenance manual pertaining to all equipment used in the silver recovery system.

An operator of a photographic imaging operation that uses two chemical recovery cartridges connected in series must keep a record book at the photographic imaging operation site which includes the following information recorded for the previous two years:

- (a) serial number of each chemical recovery cartridge used;
- (b) installation date of each chemical recovery cartridge used;
- (c) expiry date of each chemical recovery cartridge used (where provided by manufacturers or suppliers);
- (d) maximum recommended capacity, or total cumulative flow, of each chemical recovery cartridge used;
- (e) dates of all metering pump calibrations;

⁴ If treatment of liquid waste with two chemical recovery cartridges connected in series is the only silver recovery technology being used, then the owner of the photographic imaging operation must replace both chemical recovery cartridges when one of the events referred to occurs.

If treatment of liquid waste with two chemical recovery cartridges connected in series is used following treatment by an electrolytic recovery unit, the second cartridge may replace the used first cartridge and a new second cartridge may be installed when one of the events referred to occurs.

Both chemical recovery cartridges used following an electrolytic recovery unit must be replaced by the operator of the photographic imaging operation when one of the events referred to above occurs if this is recommended by the manufacturer or supplier of the cartridges.

Approved: _____

Responsible Agent: Operations

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- (f) monthly silver test results on the discharge from the first chemical recovery cartridge; or where the discharge from the first cartridge cannot be sampled, weekly silver test results on the discharge from the second chemical recovery cartridge and weekly cumulative flows through the silver recovery system; and
 - (g) dates and descriptions of all operational problems associated with the chemical recovery cartridges and remedial actions taken.

An operator of a photographic imaging operation that uses an electrolytic recovery unit in addition to two chemical recovery cartridges connected in series must keep a record book at the photographic imaging operation site which includes the following information recorded for the previous two years:

- (a) all information specified above;
- (b) date of each removal of silver from the electrolytic recovery unit;
- (c) date of each maintenance check on the electrolytic recovery unit;
- (d) dates and descriptions of all operational problems associated with the electrolytic recovery unit and remedial actions taken.

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BLACK MOUNTAIN SEWER CORPORATION

CODE OF PRACTICE

SECTION 6 - RV PARK OPERATIONS

I. APPLICATION

This code of practice for RV park operations defines the requirements for managing waste discharged directly or indirectly into a sewer connected to a sewage facility from RVs, mobile homes, trailers, watercraft and other sources which employ storage, chemical disinfection/stabilization and discharge as a waste disposal mechanism.

This code of practice applies to all RV park operations. Definitions are included in BMSC-CP-01-DEF.

II. DISCHARGE REGULATIONS

An operator of an RV park operation must not discharge waste, which at the point of discharge into a sewer, contains:

1. oil and grease in a concentration that is in excess of 100 milligrams per liter as analyzed in a grab sample;
2. suspended solids in a concentration that is in excess of 350 milligrams per liter as analyzed in a grab sample;
3. 5-day biochemical oxygen demand (BOD₅) in a concentration that is in excess of 350 milligrams per liter in a grab sample;
4. prohibited waste, restricted waste, special waste, storm water, or uncontaminated water.

if the RV park operation accepts RV customers with the intention of providing sewerage hook-ups, that practice is only acceptable if one of the following conditions is met:

1. If the RV park operation has a dedicated pre-treatment facility, that facility must be used for the disposal of the first discharge of wastewater from any entering RVs. The facility must be maintained as per manufacturer's or engineer's operating instructions. Discharge from that facility which is directed to a sewer connected to a sewerage facility shall be metered such that large slugs of waste are not introduced to the sewer instantaneously. Discharges from such facilities to sewers are limited to 10% of the ADWF (in USGPM) experienced in the sewer.
2. In the absence of a dedicated pre-treatment facility, the RV park operation shall require incoming RVs to certify that, prior to connection to a sewer, that the holding tanks of the RV have been discharged at an approved facility.

III. RECORD KEEPING AND RETENTION

An operator of an RV park operation must keep a record at the RV park operation of:

1. all disposals of RV waste into a dedicated pre-treatment facility;
2. Pre-treatment facility inspection and maintenance activities including:
 - a. the date of inspection or maintenance;
 - b. the maintenance conducted; and
 - c. the type and quantity of material removed from the facility;
3. Certifications of waste disposal prior to hook up of RVs to sewer services.

The records shall be retained for a period of two years, and shall be available on request by an sewer company employee.

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BLACK MOUNTAIN SEWER CORPORATION

CODE OF PRACTICE

SECTION 7 – PRETREATMENT/INDUSTRIAL WASTE CONTROL

I APPLICATION

This Section is adopted by the Company in accordance with the authority conferred in the Clean Water Act, and any regulations implementing the Clean Water Act, including, but not limited to, 40 CFR 403.8, applicable Arizona Revised Statutes, including but not limited to 49 A.R.S. 2, applicable Arizona Administrative Code, including but not limited to 18 A.A.C. 9 and 18. A.A.C. 11, and with all the powers thereof which are specifically granted to the Company, or are necessary or incidental to or implied from power specifically granted therein for carrying out the objectives and purposes of the Company and this Section.

II. COMPLIANCE

The Pretreatment/Industrial Waste Control Program is designed to enable the Company to comply with all conditions of any applicable National Pollutant Discharge Elimination System (AZPDES) Permit, Federal Pretreatment Regulations, Arizona Pretreatment Regulations, and any applicable sludge disposal regulations, and to meet the following objectives:

- (a) To prevent the introduction of pollutants into the Company's Facilities which will interfere with the operation of the wastewater systems or contaminate the sludge.
- (b) To prevent the introduction of pollutants into the wastewater system which will pass through the wastewater system, inadequately treated, into the receiving waters or the atmosphere.
- (c) To prevent the introduction of pollutants into the wastewater system which might constitute a hazard to humans or to animals.
- (d) To assure the Company's ability to recycle and reclaim wastewater and sludge.
- (e) To protect human health and welfare, the environment, property and the Company's wastewater system.

II. DISCHARGE REGULATIONS

A. General Discharge Limitations

No customer shall contribute or cause to be contributed, directly or indirectly, any pollutant or wastewater which will interfere with the operation or performance of the Company's wastewater system. These general prohibitions apply to all customers of the Company whether or not the customer is subject to National Categorical Pretreatment Standards or any other national, State, Company, or local pretreatment standards or requirements.

B. Specific Discharge Limitations

No User shall discharge into the Company wastewater system or into any connected sewer system at any time or over any period of time, wastewater containing any of the following materials and substances in excess of the

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limitations provided herein. These limitations may also be imposed directly on process wastewaters prior to dilution by domestic and other wastewaters discharged by a customer:

	Contaminant	Limit in mg/L
1.	Arsenic	0.45
2.	Cadmium	0.047
3.	Chromium	3.6
4.	Copper	1.5
5.	Lead	0.41
6.	Mercury	0.002
7.	Molybdenum	0.71
8.	Nickel	3.0
9.	Selenium	0.10
10.	Silver	1.2
11.	Zinc	3.5

Once promulgated, National Categorical Pretreatment Standards for a particular industrial subcategory, if more stringent, shall supersede all conflicting discharge limitations contained in this Section 7, as they apply to that industrial subcategory.

State requirements and limitations on discharges shall apply in any case where they are more stringent than federal requirements and limitations or those contained elsewhere in this Code.

C. Prohibited Discharges

None of the following described sewage, water, substances, materials, or wastes shall be discharged into the Company's wastewater system or into the sewer system by any customer, and each governing body of any applicable Service Provider shall prohibit and shall prevent such discharges by any BMSC customer, either directly or indirectly, into its sewer system:

(a) Any liquids, solids or gases which by reason of their nature or quantity are, or may be, sufficient either alone or by interaction with other substances to cause fire or explosion or be injurious in any other way to the Company's wastewater system, the sewer system of a Service Provider or any of its connectors, or to the operation of the Company. At no time shall any reading on an explosion hazard meter, at the point of discharge into the Company's wastewater system or the sewer system of a Service Provider or any of its customers (or at any point in the wastewater systems), or at any monitoring location designated by the Company in a wastewater contribution permit, be more than ten percent (10%) of the Lower Explosive Limit (LEL) of the meter. Prohibited materials include, but are not limited to, gasoline, kerosene, naphtha, benzene, toluene, xylene, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, tetrachloroethylene, perchloroethylene, bromates, carbides, hydrides, and sulfides.

(b) Any solid or viscous material which could cause an obstruction to flow in the

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sewers or in any way could interfere with the treatment process, including as examples of such materials but without limiting the generality of the foregoing, significant proportions of ashes, wax, paraffin, cinders, sand, mud, straw, shavings, metal, glass, rags, lint, feathers, tars, plastics, wood and sawdust, paunch manure, hair and fleshings, entrails, lime slurries, beer and distillery slops, grain processing wastes, grinding compounds, acetylene generation sludge, chemical residues, acid residues, food processing bulk solids, snow, ice, and all other solid objects, material, refuse, and debris not normally contained in sanitary sewage.

(c) Any wastewater having a pH less than 5.0 for discharges from Industrial Customers into the Company's wastewater system or the sewer system of a Service Provider or that of any of its Customers, or less than 6.0 or greater than 9.0 for other discharges into the Company's wastewater system, or wastewater having any other corrosive property capable of causing damage or hazard to any part of the Company's wastewater system or the sewer system of a Service Provider or any of its Customers, or to personnel.

(d) Any wastewater having a temperature which will inhibit biological activity at the Company's treatment plant, but in no case wastewater containing heat in such amounts that the temperature at the introduction into the Company's wastewater treatment exceeds 40°C (104°F).

(e) Any pollutants, including oxygen demanding pollutants (BOD, COD, etc.) released at a flow rate and/or pollutant concentration which cause Upset. In no case shall a slug load have a flow rate or contain concentrations or qualities of pollutants that exceed for any time period longer than fifteen (15) minutes more than five (5) times the average twenty-four (24) hour concentration, quantities, or flow during normal operation.

(f) Any water or wastes containing a toxic substance (such as Chlorine, etc.) in sufficient quantity, either singly or by interaction with other substances, to injure or interfere with any sewage treatment process, to constitute a hazard to humans or to animals, or to create any hazard or toxic effect in the waters which receive the treated or untreated sewage.

(g) Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin, each in amounts that will cause interference.

(h) Pollutants which result in the presence of toxic gases, vapors, or fumes within the system in a quantity that may cause acute worker health and safety problems.

(i) Any trucked or hauled pollutants except at discharge points designated by the Company.

(j) Any water or wastes containing pollutant quantities or concentrations exceeding the limitations in Section 7 of this Code of Practice, or the limitations in any applicable Categorical Standards.

III. HAZARDOUS WASTE DISCHARGE NOTICE

Any customer disposing of industrial waste shall notify the Company, the EPA Regional Waste Management Division Director, and the state hazardous waste authorities in writing of any discharge into the Company's wastewater system of any substance which, if otherwise disposed of, would be considered a hazardous waste under 40 CFR Part 261. The specific information required to be reported and the time frames in which it is to be reported are found at 40 CFR §403.12(p).

IV. REPORTING REQUIREMENTS FOR SIGNIFICANT INDUSTRIAL USERS

[RESERVED]

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V. MONITORING BMSC FACILITIES

The Company may require to be provided and operated, at the customer's own expense, monitoring facilities to allow inspection, sampling, and flow measurement of any discharges as necessary to determine compliance with the provisions of this Code.

There shall be ample room in or near such sampling manhole or facility to allow accurate sampling and preparation of samples for analysis. The facility, sampling, and measuring equipment shall be maintained at all times in a safe and proper operating condition at the expense of the customer.

The sampling and monitoring facilities shall be provided in accordance with the Company's requirements and all applicable local construction standards and specifications. Construction shall be completed within such a time frame as the Company shall specify by written notification.

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BLACK MOUNTAIN SEWER CORPORATION

CODE OF PRACTICE

SECTION 8 – NONCOMPLIANCE / ENFORCEMENT

I. NOTICE OF VIOLATIONS

Whenever the Company determines that any customer has violated or is violating any provision of this Code, federal, state or local ordinance, the Company may serve upon such customer a written notice stating the nature of the violation(s). Where directed to do so by the notice, a plan for the satisfactory correction of the violation(s) shall be submitted to the Company by the customer, within a time frame as specified in the notice.

Whenever the Company determines that any customer has violated or is violating any provision of this Code, or any directives, orders, or permits issued or approved to which the Company is bound, the Company may serve upon such customer a written notice stating the nature of the violations(s), and requiring that the customer correct the violation(s) within a specified period of time; perform such tasks as the Company determines are necessary for the customer to correct the violations; or perform such tasks and submit such information as is necessary for the Company to evaluate the extent of noncompliance or to determine appropriate enforcement actions to be taken in conjunction with the applicable regulatory agencies.

II. SUSPENSION OF SERVICE

The Company may suspend the wastewater treatment service, in accordance with A.A.C. R14-2-609, when such suspension is necessary, in the opinion of the Company, in order to stop an actual or threatened discharge which presents or may present an imminent or substantial endangerment to the health or welfare of persons, to the environment, causes pass through or interference or causes the Company to violate any condition of its aquifer protection permit or AZPDES permit.

Any customer notified of a suspension of the wastewater treatment service shall immediately stop or eliminate the discharge. In the event of a failure of the customer to comply voluntarily with the cease and desist request, the Company shall take such steps as deemed necessary, including immediate severance of the sewer connection, to prevent or minimize damage to the company's wastewater system or endangerment to any individuals or the environment. Any reconnection shall be in accordance with the Company's Tariff.

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Approved: _____

Responsible Agent: Operations

1 FENNEMORE CRAIG, P.C.
Jay L. Shapiro (No. 014650)
2 Norman D. James (No. 006901)
3003 N. Central Ave.
3 Suite 2600
Phoenix, Arizona 85012
4 Attorneys for Black Mountain Sewer Corporation

5
6 **BEFORE THE ARIZONA CORPORATION COMMISSION**

7
8 IN THE MATTER OF THE
APPLICATION OF BLACK MOUNTAIN
SEWER CORPORATION, AN ARIZONA
9 CORPORATION, FOR A
DETERMINATION OF THE FAIR
10 VALUE OF ITS UTILITY PLANT AND
PROPERTY AND FOR INCREASES IN
11 ITS RATES AND CHARGES FOR
UTILITY SERVICE BASED THEREON.

DOCKET NO: SW-02361A-08-_____

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17
18 **DIRECT TESTIMONY OF**
19 **THOMAS J. BOURASSA**
20 **(RATE BASE, INCOME STATEMENT AND RATE DESIGN)**

21 **December 19, 2008**
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1 **I. INTRODUCTION AND QUALIFICATIONS.**

2 **Q. PLEASE STATE YOUR NAME AND ADDRESS.**

3 A. My name is Thomas J. Bourassa. My business address is 139 W. Wood Drive,
4 Phoenix, Arizona 85029.

5 **Q. WHAT IS YOUR PROFESSION AND BACKGROUND?**

6 A. I am a Certified Public Accountant and am self-employed, providing consulting
7 services to utility companies as well as general accounting services. I have a B.S.
8 in Chemistry and Accounting from Northern Arizona University (1980) and an
9 M.B.A. with an emphasis in Finance from the University of Phoenix (1991).

10 **Q. COULD YOU BRIEFLY SUMMARIZE YOUR PRIOR WORK AND**
11 **REGULATORY EXPERIENCE?**

12 A. Yes. Prior to becoming a private consultant, I was employed by High-Tech
13 Institute, Inc., and served as controller and chief financial officer. Prior to working
14 for High-Tech Institute, I worked as a division controller for the Apollo Group,
15 Inc. Before joining the Apollo Group, I was employed at Kozoman & Kermode,
16 CPAs. In that position, I prepared compilations and other write-up work for water
17 and wastewater utilities, as well as tax returns.

18 In my private practice, I have prepared and/or assisted in the preparation of
19 several water and wastewater utility rate applications before the Arizona
20 Corporation Commission ("Commission").

21 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?**

22 A. I am testifying in this proceeding on behalf of the applicant, Black Mountain
23 Sewer Corporation ("BMSC" or "the Company"). BMSC is seeking increases in
24 its rates and charges for sewer utility service in its certificated service area, which
25 is located in portions of Scottsdale and Carefree, in Maricopa County, Arizona.
26 BMSC was previously named Boulders Carefree Sewer Corporation. I also

1 testified in BMSC's last rate case filed in September, 2005 based on a 2004 test
2 year. That rate case resulted in Decision No. 69164 (December 5, 2006).

3 **II. OVERVIEW OF THE COMPANY'S REQUEST FOR RATE RELIEF.**

4 **Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?**

5 A. I will testify in support of the Company's proposed adjustments to its rates and
6 charges for sewer utility service. I am sponsoring the direct schedules, which are
7 filed concurrently herewith in support of the Company's application. I was
8 responsible for the preparation of these schedules based on my investigation and
9 review of BMSC's relevant books and records.

10 For the convenience of the Commission and the parties, the two portions of
11 my direct testimony, each with the relevant schedules attached, are being filed
12 separately in this case. In this volume of my direct testimony, I address the
13 Company's rate base, its income statement (revenue and operating expenses), its
14 required increase in revenue, and its rate design and proposed rates and charges for
15 service. Schedules A through C, E-F and H are attached to this portion of my
16 direct testimony. The Company has not prepared a cost of service study, so the G
17 Schedules are omitted.

18 In the second volume of my direct testimony, to which the D schedules are
19 attached, I address cost of capital. BMSC is requesting a return on common equity
20 of 12.8 percent. As shown on Schedule D-1, the Company's capital structure for
21 ratemaking purposes consists of 100 percent equity, however, the company does
22 have over \$1 million of debt on its books, which debt was converted to an
23 operating lease by the Commission. The weighted cost of capital is 12.8 percent.

24 **Q. PLEASE SUMMARIZE THE COMPANY'S APPLICATION.**

25 A. The test year used by BMSC is the 12-month period ending June 30, 2008. The
26 Company is requesting a 12.8 percent return on its fair value rate base ("FVRB").

1 The Company has also proposed certain pro forma adjustments to take into
2 account known and measurable changes to rate base, expenses and revenues.
3 These pro forma adjustments are consistent with normal ratemaking and are
4 contemplated by the Commission's rules and regulations governing rate
5 applications. *See* R14-2-103. These adjustments are necessary to obtain a normal
6 or realistic relationship between revenues, expenses and rate base on a going-
7 forward basis.

8 The Company's fair value rate base is \$3,723,245. The increase in revenues
9 to provide for recovery of operating expenses and a 12.8 percent return on rate
10 base is approximately \$913,762, an increase of approximately 57.83 percent over
11 the adjusted and annualized test year revenues.

12 **Q. WHY IS THE COMPANY FILING FOR RATE INCREASES AT THIS**
13 **TIME?**

14 A. Since the prior decision was decided in December 2006, BMSC has made
15 investments in plant, including plant improvements that were ordered by the
16 Commission, and acquired additional required wastewater treatment capacity from
17 the City of Scottsdale. Various operating expenses have also increased. As a
18 consequence, the Company's current rate of return, based on the adjusted test year
19 data, is a negative 2.27 percent. Consequently, rate increases are necessary to
20 ensure that BMSC recovers its reasonable operating expenses and has an adequate
21 opportunity to earn a reasonable return on the fair value of its utility plant and
22 property devoted to public service.

23 **III. SUMMARY OF A, E AND F SCHEDULES.**

24 **Q. MR. BOURASSA, LET'S TURN TO THE COMPANY'S SCHEDULES.**
25 **PLEASE DESCRIBE THE SCHEDULES LABELED AS A, E, AND F.**

26 A. The A-1 Schedule is a summary of the rate base, operating income, current

1 operating margin, required operating margin, operating income deficiency, and the
2 increase in gross revenue. A 12.8 percent return on FVRB is requested. The
3 increase in the revenue requirement is \$913,762. Revenues at present and
4 proposed and customer classifications are also shown on this schedule.

5 The A-2 Schedule is a summary of results of operations for the test year,
6 prior years, and a projected year at present rates and proposed rates.

7 Schedule A-3 contains the Company's capital structure for the test year and
8 the two prior years.

9 Schedule A-4 contains the plant construction, and plant in service for the
10 test year and prior years. The projected plant additions are also shown on this
11 schedule.

12 Schedule A-5 is the summary of the Company's changes in financial
13 position (cash flow) for the prior two years, the test year at present rates, and a
14 projected year at present and proposed rates.

15 The E Schedules are based on the Company's actual operating results, as
16 reported by the Company in annual reports filed with the Commission. The E-1
17 Schedule contains the comparative balance sheet data the years 2006, 2007, and
18 2006, ending on June 30.

19 Schedule E-2, page 1, contains the income statement for the years 2006,
20 2007, and 2008, ending on June 30.

21 Schedule E-3 contains the statements of changes in the Company's financial
22 position for the test year and the two prior years.

23 Schedule E-4 provides the changes in membership equity.

24 Schedule E-5 contains the Company's plant in service at the end of the test
25 year, and one year prior to the end of the test year.

26 Schedule E-7 contains operating statistics for the years ended 2006, 2007,

1 and 2008, ending on June 30.

2 Schedule E-8 contains the taxes charged to operations.

3 The accountant's notes to the financial statements and the financial
4 assumptions used in preparing the rate filing schedules are shown on Schedules
5 E-9 and F-4, respectively, in accordance with the Commission's standard filing
6 requirements. The Company does not prepare audited financial statements.

7 Schedule F-1 contains the results of operations at the present rates (actual
8 and adjusted), and at proposed rates.

9 Schedule F-2 contains the summary of changes in financial position (cash
10 flow) for the prior two years, the test year at present rates, and a projected year at
11 present and proposed rates.

12 Schedule F-3 shows the Company's projected construction requirements for
13 2009, 2010, and 2011.

14 Schedule F-4 contains the assumptions used in developing the adjustments
15 and projections contained in the rate filing.

16 **IV. RATE BASE (B SCHEDULES).**

17 **Q. WOULD YOU EXPLAIN THE RATE BASE SCHEDULES, WHICH ARE**
18 **LABELED AS THE B SCHEDULES?**

19 A. Yes. I will start with Schedule B-5, which is the working capital allowance.
20 Because BMSC is a small sewer utility, I used the "formula method" of computing
21 the working capital allowance to reduce costs. The Company is not requesting a
22 working capital allowance.

23 **Q. PLEASE CONTINUE.**

24 A. The Company did not file Schedules B-3 and B-4. To limit issues in dispute and
25 reduce rate case expense, BMSC is requesting that its original cost rate base
26 ("OCRB") be used as its FVRB.

1 **Q. HAVE YOU PREPARED SCHEDULES SHOWING ADJUSTMENTS TO**
2 **THE ORIGINAL COST RATE BASE?**

3 A. Yes. Schedule B-2 shows adjustments to the OCRB cost rate base proposed by the
4 Company. Schedule B-2, pages 2 through 6, provide the supporting information.
5 These adjustments are, in summary:

6 Adjustment number 1, as shown on Schedule B-2, page 3, adjusts plant-in-
7 service to reflect the unrecorded plant adjustments from the prior case (Decision
8 No. 69164), to remove capitalized affiliate profits recorded since the end of the last
9 test year, and to remove the costs of the CIE lift station retired since the end of the
10 last test year but not yet recorded on the books. Also included is a small
11 adjustment to reconcile the Company's book balance to the Company's fixed asset
12 ledger.

13 Adjustment number 2, as shown on Schedule B-2, page 4, adjusts
14 accumulated depreciation to reflect the recomputed amounts per the Company's B-
15 2 plant schedule.

16 **Q. DO THE PLANT AND ACCUMULATED DEPRECIATION SHOWN ON**
17 **THE B-2 SCHEDULE REFLECT THE LAST RATE ORDER?**

18 A. Yes. The plant shown on Schedule B-2 started with the Commission-determined
19 plant from the last rate case. Reconciliation to the starting balances for plant-in-
20 service and accumulated depreciation are shown on Schedule B-2, pages 3.6 and
21 3.7. Plant additions and retirements since the test year in that case have been
22 added to and deducted from total plant shown on Schedule B-2, pages 3.1 to 3.4.
23 As mentioned above, capitalized affiliate profit recorded in the plant additions for
24 each year have been deducted from the plant. Pages 3.1 to 3.5 of the schedule
25 show the details for the accumulated depreciation through the end of the test year
26 using the half-year convention for depreciation.

1 **Q. THANK YOU. PLEASE CONTINUE.**

2 A. Adjustment number 3 increases deferred regulatory assets for the unamortized
3 portion of additional Scottsdale treatment capacity of 81,049 gpd acquired by the
4 Company since December 31, 2004, the end of the last test year.

5 **Q. IS THIS THE SAME RATEMAKING TREATMENT GIVEN TO**
6 **SCOTTSDALE TREATMENT CAPACITY COSTS IN THE LAST CASE?**

7 A. No. Under the approach adopted by the Commission in Decision No. 59944
8 (December 26, 1996) and Decision No. 60240 (June 12, 1997), then reaffirmed in
9 the last case (Decision No. 69164), the debt service on the debt used to fund the
10 acquisition of Scottsdale capacity of 318,951 gpd is treated as an operating lease
11 and included in operating expenses as lease expense. There was no rate base
12 treatment associated with the Scottsdale capacity under the approach ordered by
13 the Commission for the previously acquired treatment capacity. In contrast, the
14 additional 81,049 gpd of treatment capacity purchased by the Company since the
15 last rate case has been funded with equity, not debt. BMSC believes that this new
16 capacity should be afforded rate base treatment and amortization included in
17 operating expenses.

18 **Q. WHY DOES THE COMPANY BELIEVE THIS CAPACITY PURCHASE**
19 **SHOULD BE TREATED DIFFERENTLY?**

20 A. The reason for this is two-fold. First, the traditional ratemaking treatment for
21 acquired contractual rights with a limited benefit period is to treat these rights as a
22 regulatory asset and to amortize the asset through operating expenses. Second, this
23 capacity is funded by equity, not debt, and has no associated annual debt service
24 (or interest expense). To treat this treatment capacity similar to the treatment
25 capacity BMSC purchased from Scottsdale more than a decade ago, one would
26 have to assume an interest rate equal to the cost of equity and assume a repayment

1 period of 10 years. But since there is no interest deduction associated with this
2 debt, the impact on the revenue requirement would be greater under an operating
3 lease approach.

4 **Q. WHY WOULD A 10-YEAR REPAYMENT PERIOD BE ASSUMED?**

5 A. The agreement with the City of Scottsdale expires in 2016. Since the Company
6 acquired the additional capacity in 2006, a 10-year repayment period would have to
7 be assumed.

8 **Q. IF YOU WERE TO ASSUME THAT THE ADDITIONAL 81,049 GPD OF**
9 **CAPACITY WERE FUNDED BY DEBT WITH AN INTEREST COST**
10 **EQUAL TO THE COST OF EQUITY OF 12.8 PERCENT AND TREATED**
11 **SIMILAR TO TREATMENT CAPACITY PREVIOUSLY ACQUIRED**
12 **FROM SCOTTSDALE, WHAT WOULD BE THE IMPACT ON THE**
13 **REVENUE REQUIREMENT?**

14 A. The revenue requirement would be higher by at least \$16,600.

15 **Q. WHY WOULD THE REVENUE REQUIREMENT BE HIGHER UNDER**
16 **AN OPERATING LEASE APPROACH?**

17 A. Again, in the instant case, BMSC is proposing rate base treatment for the
18 amortized portion of the cost of the additional capacity of 81,049 gpd recently
19 acquired, or \$389,035. The impact of the return and income taxes is \$129,727
20 (\$389,035 times 12.8% cost of equity times 1.6286 tax factor plus \$48,629 of
21 amortization). Under an operating lease approach, the impact on the revenue
22 requirement would be \$146,418 (\$89,904 annual "debt service" times 1.6286 tax
23 factor¹). The difference in revenue requirements is \$16,691.

24
25 ¹ There is no interest expense associated with equity, and thus no interest expense deduction for
26 income tax purposes. There is also no evidence that BMSC could have acquired debt to purchase
the capacity, and even if it could, no basis to assume the cost of such debt.

1 **Q. WHY HASN'T THE COMPANY PROPOSED THAT THE PREVIOUSLY**
2 **ACQUIRED 318,951 GPD OF CAPACITY BE RATE BASED AND**
3 **AMORTIZED IN THE INSTANT CASE?**

4 A. Because it would be unfair and arbitrary to switch ratemaking treatment on this
5 capacity after the Company was ordered to treat the acquisition costs of this
6 capacity as an operating lease in the past. *See* Decision No. 69164 at 8-9.

7 **Q. PLEASE CONTINUE WITH YOUR TESTIMONY REGARDING THE**
8 **RATE BASE SCHEDULES.**

9 A. Adjustment number 4, labeled as 4a and 4b, adjusts contributions in aid of
10 construction ("CIAC") and amortization based on additional CIAC recorded since
11 the since the prior rate case.

12 Adjustment number 5 increases deferred income taxes. The Company's
13 computation is based on the adjusted plant-in-service, accumulated depreciation,
14 and CIAC in the instant case and the tax basis of its assets using the tax rate found
15 on Schedule C-3.

16 **Q. HOW WAS THE PROPOSED "FAIR VALUE" RATE BASE SHOWN ON**
17 **A-1 DETERMINED?**

18 A. As stated, the FVRB shown on Schedule A-1 is based on OCRB, with no
19 adjustment for the current values of the Company's plant and property.

20 **V. INCOME STATEMENT (C SCHEDULES).**

21 **Q. PLEASE EXPLAIN THE ADJUSTMENTS YOU ARE PROPOSING TO**
22 **THE INCOME STATEMENT AS SHOWN ON SCHEDULES C-1 AND C-2.**

23 A. The following is a summary of adjustments shown on Schedule C-1:

24 Adjustment 1 annualizes depreciation expense. The proposed depreciation
25 rate for each component of utility plant is shown on Schedule C-2, page 2. The
26

1 depreciation rates approved in the Company's last rate case were account specific
2 rates.

3 Adjustment 2 increases the property taxes based on proposed revenues. The
4 Company has recognized the reduction in the assessment ratio contained in A.R.S.
5 § 42-15001, entitled "Assessed Valuation of Class One Property"). By law, the
6 assessment ratio will be reduced through tax year 2011 to 20 percent. The
7 Company has proposed a two-year reduction in the assessment ratio or a reduction
8 from the 23 percent employed for the 2008 property tax year to 21 percent for
9 2010 property tax year.

10 **Q. HOW DID YOU COMPUTE THE PROPERTY TAXES AT PROPOSED**
11 **RATES?**

12 A. To determine full cash value, I used the method employed by the Arizona
13 Department of Revenue - Centrally Valued Properties ("ADOR" or "the
14 Department"). This method determines full cash value by using twice the average
15 of three years of revenue, plus an addition for CWIP and a deduction for the book
16 value of transportation equipment. In the instant case, I used two times the
17 adjusted revenues for the year end June 30, 2008, and one year of revenues at
18 proposed rates. The assessed value (21 percent of full cash value) was then
19 multiplied by the property tax rate to determine adjusted property tax expense.

20 **Q. IS THIS CONSISTENT WITH PRIOR COMMISSION DECISIONS?**

21 A. Yes. *E.g., Chaparral City Water Company*, Decision No. 68176 at 13, *Rio Rico*
22 *Utilities*, Decision No. 67279 at 8; *Arizona Water Company*, Decision No. 64282
23 at 12-13; *Bella Vista Water Company*, Decision No. 65350 at 16; *Arizona-*
24 *American Water Company*, Decision No. 67093 at 9-10. It is also consistent with
25 the methodology adopted in the prior case. *See* Decision No. 69164 at 10-11.
26

1 **Q. IS THIS SYNCHRONIZATION OF PROPERTY TAX EXPENSE WITH**
2 **REVENUES PROPER RATE MAKING?**

3 A. Yes. Like income taxes, property taxes must be adjusted to ensure that the new
4 rates are sufficient to produce the authorized return on rate base. For this reason,
5 the Commission has repeatedly approved the use of proposed revenues to
6 determine an appropriate level of property tax expense to be recovered through
7 rates.

8 To eliminate issues, I used the methodology approved by the Commission in
9 Arizona-American Water Company's rate case, Decision No. 67093 (June 30,
10 2004), where two years of adjusted test year revenues and one year of proposed
11 revenues were used to determine full cash value. In that decision, the Commission
12 concluded: "Staff calculated property taxes using its proposed adjusted test year
13 revenues twice and its recommended revenues once to calculate a three year
14 average of revenues. We agree with Staff that using only historical revenues to
15 calculate property taxes to include in the cost of service fails to capture the effects
16 of future revenue from new rates, and can result in an understatement or
17 overstatement of property tax expense." Decision No. 67093 at 9-10.

18 **Q. PLEASE CONTINUE WITH YOUR DESCRIPTION OF THE INCOME**
19 **STATEMENT ADJUSTMENTS.**

20 A. Adjustment number 3 adjusts operating expenses for "lease" costs associated with
21 the Scottsdale treatment capacity of 318,951 gpd. These costs reflect the annual
22 debt service on the long-term debt the Company incurred to finance the acquisition
23 of wastewater treatment capacity from Scottsdale.

24 **Q. WHAT AMOUNT OF LONG-TERM DEBT IS FINANCING THE 318,951**
25 **GPD OF SCOTTSDALE TREATMENT CAPACITY?**

26 A. The Commission granted approval of long-term debt in the amount \$960,000 in

1 Decision No. 59944 (December 26, 1996) to acquire wastewater treatment
2 capacity from Scottsdale. The Company paid a total of \$1,260,000 for the right to
3 utilize 210,000 gallons of treatment capacity, of which \$960,000 was financed by
4 debt and \$300,000 was financed by CIAC. Another \$500,000 of long-term debt
5 was approved in Decision No. 60240 (June, 1997). The Company used those
6 funds to acquire an additional 108,951 gallons of treatment capacity from
7 Scottsdale for \$653,706, of which \$500,000 was financed by long-term debt and
8 \$153,706 was financed by CIAC. Both loans have a 9.4% interest rate and a term
9 of 20 years.

10 The principle balance of the long-term debt at June 30, 2008 and financing
11 Scottsdale treatment capacity was \$1,010,649 (approximately \$659,546 for the
12 loan approved in Decision No. 59944 and \$351,103 for the loan approved in
13 Decision No. 60240).

14 **Q. DOES THE ANNUAL "LEASE" EXPENSE INCLUDE A GROSS UP FOR**
15 **INCOME TAXES?**

16 A. No. Instead, I have excluded the annual lease costs in the computation of taxable
17 income resulting in higher income taxes. This is the same methodology approved
18 in the prior decision. *See* Decision No. 69164 at 9.

19 **Q. PLEASE CONTINUE.**

20 A. Adjustment 4 shows the rate case expense. The Company estimates rate case
21 expense of \$180,000 to be recovered over three years because it believes a three-
22 year cycle for future rate cases is reasonable given this utility's circumstances.

23 **Q. WHAT WAS THE AMOUNT APPROVED IN THE LAST CASE?**

24 A. \$150,000. *Id.* at 12.

1 **Q. DO YOU BELIEVE \$180,000 IS A REASONABLE AMOUNT OF RATE**
2 **CASE EXPENSE GIVEN THE REQUESTED INCREASE IN REVENUE?**

3 A. Yes. BMSC expended well over \$225,000 in the last case. Considering inflation,
4 the Company expects to expend at least that much in this case. The request of
5 \$180,000 is significantly less than the amount likely to be incurred and is a
6 reasonable estimate at this time.

7 **Q. IS THIS THE REASON YOU REFERRED TO THE RATE CASE**
8 **EXPENSE AS AN "ESTIMATE"?**

9 A. Yes, it is an estimate based on my experience because, at this time, I can only
10 consider the foreseeable. If things turn out more complicated than anticipated, the
11 Company will modify its request to account for that increased expense.
12 Conversely, if the case proceeds and rate case expense is lower than expected,
13 BMSC would make an appropriate adjustment downward.

14 **Q. SHOULDN'T THE COMPANY'S SHAREHOLDERS BEAR SOME OF**
15 **THE BURDEN OF RATE CASE EXPENSE?**

16 A. As a practical matter, the utility always does. My estimate of \$180,000 assumes
17 BMSC will actually incur a higher amount of total rate case expense. I would also
18 agree that if the utility does something improper, or advances positions in bad-
19 faith, it should shoulder the burden of such actions. But, as I testified, the
20 Commission dictates the process, not the utility, and absent such circumstances,
21 the utility should be allowed to recover its reasonably incurred rate case expense.

22 **Q. PLEASE CONTINUE WITH YOUR DISCUSSION OF THE INCOME**
23 **STATEMENT ADJUSTMENTS?**

24 A. Adjustment 5 annualizes revenues to the year-end number of customers. The
25 annualization was based on the number of customers at the end of the test year,
26 compared to the actual number of customers during each month of the test year.

1 Average revenues by month were computed for the test year. The average
2 revenues were then multiplied by the increase (or decrease) in number of
3 customers for each month of the test year.

4 Adjustment 6 reflects the increase in the annual purchased wastewater
5 treatment costs for the City of Scottsdale. The increase is the result of a known
6 and measurable change that occurred on July 1, 2008.

7 Adjustment 7 annualizes purchased wastewater treatment for additional
8 gallons treated from annualizing revenues to year-end number of customers.

9 Adjustment 8 increases chemicals expense for increases in costs for
10 chemicals used for odor control.

11 Adjustment 9 annualizes chemicals expense based on the additional gallons
12 treated from annualizing revenues to the year-end number of customers.

13 Adjustment 10 annualizes purchased power expense based on the additional
14 gallons treated from annualizing revenues to the year-end number of customers.

15 Adjustment 11 increases contractual services costs for known and
16 measurable changes to the allocated portions of operations, accounting and billing,
17 and corporate overhead costs since the end of the test year.

18 **Q. DO THE CONTRACTUAL COSTS THE COMPANY HAS RECORDED IN**
19 **EXPENSE FOR THE TEST YEAR EXCLUDE AFFILIATE PROFIT?**

20 **A.** Yes, the test year costs reflect actual costs. Since the last rate case, the Company's
21 parent has developed methodologies consistent with rate making practices to
22 allocate and record shared costs used by similarly situated holding companies
23 where the parent company owns more than one subsidiary utility. For example,
24 under the allocation methodology, operation labor costs are directly allocated based
25 on operator time, accounting and billing costs are allocated based on a customer
26 allocation factor, and corporate overhead is allocated based upon a 4-factor

1 methodology. BMSC's parent has compared the amounts recorded in expense on
2 the books of BMSC and the allocated cost based on its methodology and has
3 determined that the amounts recorded in expense for the test year are, in fact,
4 slightly less than cost.

5 **Q. THANK YOU. PLEASE CONTINUE.**

6 A. Adjustment 12 reflects the annual amortization of the cost of additional Scottsdale
7 treatment capacity of 81,049 gpd acquired since the last test year, as discussed
8 previously.

9 Adjustment number 13 synchronizes interest expense with rate base. While
10 there is no debt in the capital structure for rate making, this adjustment is necessary
11 to match the interest portion of the annual "lease" costs included in operating
12 expenses.

13 Adjustment number 14 reflects the income taxes at proposed rates.

14 There are no further adjustments to the Income Statement at this time.

15 **VI. RATE DESIGN (H SCHEDULES).**

16 **Q. WHAT ARE THE COMPANY'S PRESENT RATES?**

17 A. The Company's present rates are:

18 Residential Charge:	\$45.64
19 Commercial – Std. Rate (Per gallon) ² :	\$0.18298
20 Commercial – Special Rate (Per gallon) ³ :	
21 B-H Enterprises (7518 Elbow Bend West)	\$0.14034

22
23 ² Per prior Commission order, commercial wastewater flows are based on the average
24 daily flows set forth in Engineering Bulletin No. 12, Table 1, published by the Arizona
Department of Environmental Quality (June 1989).

25 ³ Per prior Commission order, wastewater flows are based on Engineering Bulletin No.
26 12, Table 1. A one-bedroom dwelling is assumed to generate 200 gallons per day, each
additional bedroom is assumed to generate an additional 100 gallons per day.

1	B-H Enterprises (7518 Elbow Bend East)	\$0.14034
2	Barb's Pet Grooming	\$0.14034
3	Boulders Resort	\$0.14223
4	Carefree Dental	\$0.14034
5	Ridgecrest Realty	\$0.14193
6	Desert Forest	\$0.16344
7	Desert Hills Pharmacy	\$0.17061
8	El Pedegral	\$0.14034
9	Lemon Tree	\$0.13691
10	Body Shop	\$0.17467
11	Spanish Village	\$0.14034
12	Boulders Club	\$0.14034
13	Anthony Vuitaggio	\$0.15597

14 In addition, the price for reclaimed (non-potable) water is \$122.00 per acre-foot or
15 \$0.37440 per 1,000 gallons.

16 **Q. WHAT ARE THE PROPOSED RATES?**

17 A. The proposed rates are:

18	Residential Charge:	\$71.08
19	Commercial – Std. Rate (Per gallon) ⁴ :	\$0.28499
20	Commercial – Special Rate (Per gallon) ⁵ :	

21	B-H Enterprises (7518 Elbow Bend West)	N/A
----	--	-----

22
23 ⁴ Per prior Commission order, commercial wastewater flows are based on the average
24 daily flows set forth in Engineering Bulletin No. 12, Table 1, published by the Arizona
Department of Environmental Quality (June 1989).

25 ⁵ Per prior Commission order, wastewater flows are based on Engineering Bulletin No.
26 12, Table 1. A one-bedroom dwelling is assumed to generate 200 gallons per day, each
additional bedroom is assumed to generate an additional 100 gallons per day.

1	B-H Enterprises (7518 Elbow Bend East)	N/A
2	Barb's Pet Grooming	N/A
3	Boulders Resort	\$0.28499
4	Carefree Dental	N/A
5	Ridgecrest Realty	N/A
6	Desert Forest	\$0.28499
7	Desert Hills Pharmacy	N/A
8	El Pedegral	\$0.28499
9	Lemon Tree	N/A
10	Body Shop	N/A
11	Spanish Village	\$0.28499
12	Boulders Club	\$0.28499
13	Anthony Vuitaggio	N/A

14 In addition, the proposed charge for reclaimed (non-potable) water is \$150 per
15 acre-foot.

16 **Q. WHY ARE THERE NO PROPOSED COMMERCIAL SPECIAL RATES**
17 **FOR SOME OF THE CUSTOMERS LISTED ABOVE?**

18 A. Because these customers no longer exist.

19 **Q. THE SPECIAL COMMERCIAL RATES APPEAR TO BE THE SAME AS**
20 **THE STANDARD COMMERCIAL RATE. DOES THIS MEAN THAT**
21 **BMSC IS PROPOSING THAT THE SPECIAL COMMERCIAL RATE BE**
22 **ELIMINATED?**

23 A. Yes. There are only a small handful (4 or 5) remaining commercial customers that
24 have a special rate. The Company believes that the special rate is no longer
25 justified.

26

1 Q. WHY IS THE COMPANY PROPOSING THE EFFLUENT RATE
2 INCREASE LESS THAN THE RESIDENTIAL AND COMMERCIAL
3 RATES?

4 A. For two reasons. First, the proposed charge is to encourage continued use of
5 effluent by the Boulders Resort. The Company has a contractual arrangement with
6 the Boulders Resort which requires Boulders Resort to accept up to 150,000 gpd of
7 effluent. Per that agreement, if the effluent rate increases more than 25 percent in
8 a given year, the Boulders Resort could terminate the agreement thereby forcing
9 the Company to find other effluent disposal alternatives. Second, the alternatives
10 available to the Company for disposing of effluent are much more costly. If the
11 Company cannot dispose of effluent generated by its own facilities by selling it, it
12 must divert more sewage flow to the City of Scottsdale. The cost of treatment by
13 the City of Scottsdale is now over \$3.00 per 1,000 gallons. Diverting flow for
14 treatment would effectively mean a cost of disposal of more than \$970 per acre
15 foot of generated effluent (\$3.00 times 325.851 thousand gallons per acre foot).
16 Further, diverting more sewage flow to the City of Scottsdale would require the
17 purchase of additional capacity at a cost of \$6 per gallon per day.

18 Q. IS THE COMPANY PROPOSING AN ADJUSTER MECHANISM FOR
19 PURCHASED WASTEWATER TREATMENT?

20 A. Yes. The reason for this is that increases in purchased wastewater treatment costs
21 are beyond the control of the Company and are expected to increase at an annual
22 rate of over 6 percent in the future. Further, purchased wastewater treatment costs
23 comprise a significant portion of the Company's operating expenses. In fact, over
24 20 percent of operating expenses (excluding income taxes). A six percent increase
25 represents nearly \$20,000 annually in increased costs and would have a significant
26

1 detrimental impact on the Company's earnings and its ability to earn its authorized
2 return.

3 **Q. HOW WILL THE ADJUSTER MECHANISM WORK?**

4 A. Based on the Company's application and the proposed level of purchased
5 wastewater treatment costs included in the revenue requirement, the baseline cost
6 per 1,000 gallons of treated sewage would be \$3.13 (baseline rate) which includes
7 all applicable taxes and fees. For each year, the Company would compute a total
8 amount to be recovered through the adjuster and then determine a monthly charge
9 for each customer based on the customer's rated gpd relative to the total rated gpd
10 of all customers. For example, based on ADEQ Engineering bulletin 12, a typical
11 residential unit is rated at 320 gpd of sewage flow. The commercial customers'
12 rated gpd, and also based on ADEQ Engineering Bulletin 12, varies based on the
13 type of commercial business. For the test year and based upon the rated gallons
14 for all customers, residential customers comprised 73 percent of all rated gallons.

15 The amount to be collected through the adjuster would be equal to the total
16 cost difference computed by taking the current year's gallons treated (in 1,000's)
17 times the current rate for treatment and the baseline rate. For example, if the
18 gallons treated were 100,000 thousand gallons and the current rate is \$3.30, the
19 computed amount would be \$17,000 (\$3.30 minus \$3.13 times 100,000 thousand
20 gallons). Based on the test year, the amount to be collected from residential
21 customers would be \$12,410 (\$17,000 times 73 percent) and the amount to be
22 collected from the commercial customers would be \$4,590 (\$17,000 minus
23 \$12,410). Since each residential customer has an equivalent gpd rating, based on
24 the test year end number of residential customers, each residential customer would
25 pay a monthly adjuster charge of \$0.524 (\$12,410 divided by 1,972 residential
26 customers divided by 12). Each commercial customer would have an adjuster

1 based on their gpd rating relative to the total commercial rated gallons. For
2 simplicity, and assuming all commercial customers are rated equally, the
3 commercial customer monthly adjuster based on the test year end number of
4 commercial customers would be \$2.94 (\$4,590 divided by 130 commercial
5 customers divided by 12).

6 **Q. WOULD THE COMPANY BE COLLECTING THE DIFFERENCE IN**
7 **COST IN THE YEAR FOLLOWING WHEN THE INCREASE IN COST**
8 **OCCURRED?**

9 A. Yes.

10 **Q. WOULD THE COMPANY PERFORM AN ANNUAL TRUE-UP TO**
11 **ENSURE THE COMPANY DOES NOT OVER (OR UNDER) COLLECT**
12 **THE COST DIFFERENCE?**

13 A. Yes.

14 **Q. IS THE COMPANY PROPOSING AN OFF-SITE FACILITIES HOOK-UP**
15 **FEE FOR NEW SERVICE CONNECTIONS?**

16 A. Yes. The Company is proposing a hook-up fee ("HUF") for new connections of
17 \$8.00 per gpd per day. An equivalent residential unit, rated at 320 gpd, would pay
18 a HUF of \$2,560 (320 gpd times \$8.00).

19 **Q. WHAT IS THE PURPOSE OF THE HOOK-UP FEE?**

20 A. To generate funds for the purpose of either constructing and/or purchasing
21 wastewater treatment capacity. The funds will be recorded as contributions-in-aid
22 of construction ("CIAC"), which will help to offset increases in rates in the future.

23 The Company's request for a HUF is based on the fact that the City of
24 Scottsdale wastewater treatment agreement will expire in 2016. Before that occurs
25 the Company will be faced with renewing its contract (assuming the City of
26 Scottsdale is willing) or constructing additional facilities of its own to provide

1 adequate treatment capacity for existing customers as well as future customer
2 growth. The Company expects that if it is able to renew its contract with the City
3 of Scottsdale, the costs to purchase treatment capacity will be greater than the
4 \$6.00 per gallon per day set forth in the current agreement. Alternatively, the
5 Company could construct new treatment facilities. Under either scenario, the
6 proposed HUF will cover only a fraction of the anticipated costs but is nevertheless
7 anticipated to help minimize future rate increases.

8 **Q. ARE THERE ANY PROPOSED CHANGES TO THE COMPANY'S**
9 **MISCELLANEOUS SERVICE CHARGES?**

10 A. No.

11 **Q. DOES THAT CONCLUDE YOUR TESTIMONY?**

12 A. Yes.

Black Mountain Sewer Corporation Application

**Direct Testimony Of Thomas J. Bourassa
(Rate Base, Income Statement And Rate Design)**

Schedules

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Computation of Increase in Gross Revenue
Requirements As Adjusted

Exhibit
Schedule A-1
Page 1
Witness: Bourassa

Line

No.

1	Fair Value Rate Base	\$	3,723,245
2			
3	Adjusted Operating Income		(84,485)
4			
5	Current Rate of Return		-2.27%
6			
7	Required Operating Income	\$	476,575
8			
9	Required Rate of Return on Fair Value Rate Base		12.80%
10			
11	Operating Income Deficiency	\$	561,060
12			
13	Gross Revenue Conversion Factor		1.6286
14			
15	Increase in Gross Revenue Revenue Requirement	\$	913,762
16			
17	Test Year Revenues	\$	1,580,170
18	Increase in Gross Revenue Revenue Requirement	\$	913,762
19	Proposed Revenue Requirement	\$	2,493,932
20	% Increase		57.83%

21					
22	Customer	Present	Proposed	Dollar	Percent
23	Classification	Rates	Rates	Increase	Increase
24					
25					
26	Residential	\$ 1,077,880	\$ 1,678,696	\$ 600,816	55.74%
27	Commercial (Standard Rate)	378,678	589,788	211,110	55.75%
28	Commercial (Special Rate)	98,964	195,675	96,711	97.72%
29	Effluent Sales	15,917	19,578	3,661	23.00%
30					
31	Annualization	2,145	3,341	1,196	55.74%
32				-	0.00%
33	Subtotal	\$ 1,573,584	\$ 2,487,078	\$ 913,495	58.05%
34					
35	Other Wastewater Revenues	6,915	6,915	-	0.00%
36	Reconciling Amount H-1 to C-1	(329)	(62)	267	-81.16%
37					
38	Total of Water Revenues	\$ 1,580,499	\$ 2,493,993	\$ 913,762	57.81%

39

40

41

42 SUPPORTING SCHEDULES:

43 B-1

44 C-1

45 C-3

46 H-1

47

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Summary of Results of Operations

Exhibit
Schedule A-2
Page 1
Witness: Bourassa

Line No.	Description	Prior Years Ended		Test Year		Projected Year	
		6/30/2006	6/30/2007	Actual 6/30/2008	Adjusted 6/30/2008	Present Rates 6/30/2009	Proposed Rates 6/30/2009
1	Gross Revenues	\$ 1,286,374	\$ 1,446,140	\$ 1,578,025	\$ 1,580,170	\$ 1,580,170	\$ 2,493,932
2							
3	Revenue Deductions and	955,296	1,234,217	1,424,405	1,664,655	1,664,655	2,017,356
4	Operating Expenses						
5							
6	Operating Income	\$ 331,078	\$ 211,923	\$ 153,620	\$ (84,485)	\$ (84,485)	\$ 476,575
7							
8	Other Income and	-	-	-	-	-	-
9	Deductions						
10							
11	Interest Expense	(109,872)	(103,962)	(98,285)	(67,693)	(67,693)	(67,693)
12							
13	Net Income	\$ 221,206	\$ 107,961	\$ 55,335	\$ (152,178)	\$ (152,178)	\$ 408,882
14							
15	Earned Per Average						
16	Common Share	0.48	0.23	0.12	(0.33)	(0.33)	0.89
17							
18	Dividends Per						
19	Common Share	-	-	-	-	-	-
20							
21	Payout Ratio	-	-	-	-	-	-
22							
23	Return on Average						
24	Invested Capital	3.21%	1.52%	0.73%	-2.19%	-2.16%	5.80%
25							
26	Return on Year End						
27	Capital	3.05%	1.55%	0.68%	-2.19%	-2.14%	5.74%
28							
29	Return on Average						
30	Common Equity	14.59%	4.39%	1.62%	-5.08%	-4.12%	10.28%
31							
32	Return on Year End						
33	Common Equity	11.96%	3.51%	1.47%	-5.21%	-4.20%	9.78%
34							
35	Times Bond Interest Earned						
36	Before Income Taxes	3.92	3.08	2.84	(0.67)	(0.67)	7.35
37							
38	Times Total Interest and						
39	Preferred Dividends Earned						
40	After Income Taxes	3.01	2.04	1.56	1.35	1.35	4.19
41							
42							
43	<u>SUPPORTING SCHEDULES</u>						
44	C-1						
45	E-2						
46	F-1						

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Summary of Capital Structure

Exhibit
Schedule A-3
Page 1
Witness: Bourassa

Line No.	Description:	Prior Years Ended		Test Year	Projected Year
		<u>6/30/2006</u>	<u>6/30/2007</u>	<u>6/30/2008</u>	<u>6/30/2009</u>
1					
2					
3	Long-Term Debt	1,329,161	1,258,423	1,010,649	940,875
4					
5	Total Debt	\$ 1,329,161	\$ 1,258,423	\$ 1,010,649	\$ 940,875
6					
7					
8	Preferred Stock	-	-	-	-
9					
10	Common Equity	1,850,199	3,072,632	3,772,970	4,181,852
11					
12					
13	Total Capital & Debt	\$ 3,179,360	\$ 4,331,055	\$ 4,783,619	\$ 5,122,727
14					
15					
16	Capitalization Ratios:				
17					
18	Long-Term Debt	41.81%	29.06%	21.13%	18.37%
19					
20	Total Debt	41.81%	29.06%	21.13%	18.37%
21					
22					
23	Preferred Stock	-	-	-	-
24					
25	Common Equity	58.19%	70.94%	78.87%	81.63%
26					
27					
28	Total Capital	100.00%	100.00%	100.00%	100.00%
29					
30					
31	Weighted Cost of				
32	Senior Capital	9.40%	9.40%	9.40%	9.40%
33					
34					
35					
36					
37					
38					
39	<u>SUPPORTING SCHEDULES:</u>				
40	E-1				
41	D-1				

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Construction Expenditures
and Gross Utility Plant in Service

Exhibit
Schedule A-4
Page 1
Witness: Bourassa

Line No.		Construction Expenditures	Net Plant Placed in Service	Gross Utility Plant in Service
1				
2	Prior Year Ended 06/30/2006	974,274	303,012	9,119,420
3				
4	Prior Year Ended 06/30/2007	575,114	103,815	9,223,235
5				
6	Test Year Ended 06/30/2008	1,696,153	2,118,972	11,342,207
7				
8	Projected Year Ended 06/30/2009	232,450	232,450	11,574,657
9				
10				
11				
12				
13	<u>SUPPORTING SCHEDULES:</u>			
14	B-2			
15	E-5			
16	F-3			
17				
18				

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Summary Statements of Cash Flows

Exhibit
Schedule A-5
Page 1
Witness: Bourassa

Line
No.

	Prior Year Ended 6/30/2006	Prior Year Ended 6/30/2007	Test Year Ended 6/30/2008	Projected Year Present Rates 6/30/2009	Projected Rates 6/30/2009
1					
2					
3					
4					
5	Cash Flows from Operating Activities				
6					
7					
8					
9					
10					
11					
12					
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46					

SUPPORTING SCHEDULES:

E-3

F-2

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Summary of Rate Base

Exhibit
Schedule B-1
Page 1
Witness: Bourassa

Line No.		Original Cost Rate base	Fair Value Rate Base
1			
2	Gross Utility Plant in Service	\$ 11,357,735	\$ 11,357,735
3	Less: Accumulated Depreciation	5,625,025	5,625,025
4			
5	Net Utility Plant in Service	\$ 5,732,710	\$ 5,732,710
6			
7	<u>Less:</u>		
8	Advances in Aid of		
9	Construction	1,457,009	1,457,009
10	Contributions in Aid of		
11	Construction	5,232,139	5,232,139
12	Accumulated Amortization of CIAC	(4,214,384)	(4,214,384)
13			
14	Customer Meter Deposits	94,290	94,290
15	Deferred Income Taxes & Credits	(170,554)	(170,554)
16		-	-
17			
18			
19	<u>Plus:</u>		
20	Unamortized Finance		
21	Charges	-	-
22	Deferred Regulatory Assets	389,035	389,035
23	Allowance for Working Capital	-	-
24			
25			
26	Total Rate Base	\$ 3,723,245	\$ 3,723,245
27			
28			
29			
30	<u>SUPPORTING SCHEDULES:</u>		
31	B-2		
32	B-3		
33	B-5		
34	E-1		
35			

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Original Cost Rate Base Proforma Adjustments

Exhibit
Schedule B-2
Page 1
Witness: Bourassa

Line No.		Actual at End of Test Year	Proforma Adjustments Amount	Adjusted at end of Test Year
1	Gross Utility			
2	Plant in Service	\$ 11,342,207	15,528	\$ 11,357,735
3				
4	Less:			
5	Accumulated			
6	Depreciation	5,947,887	(322,862)	5,625,025
7				
8				
9	Net Utility Plant			
10	in Service	\$ 5,394,320		\$ 5,732,710
11				
12	Less:			
13	Advances in Aid of			
14	Construction	1,457,009	-	1,457,009
15				
16	Contributions in Aid of			
17	Construction (CIAC)	5,341,461	(109,322)	5,232,139
18				
19	Accumulated Amortization of CIAC	(4,485,415)	271,031	(4,214,384)
20				
21	Customer Meter Deposits	94,290	-	94,290
22	Deferred Income Taxes	-	(170,554)	(170,554)
23				
24				
25	Plus:			
26	Unamortized Finance			
27	Charges	-	-	-
28	Deferred Regulatory Assets	-	389,035	389,035
29	Allowance for Working Capital	-	-	-
30				
31	Total	<u>\$ 2,986,975</u>		<u>\$ 3,723,245</u>
32				
33				
34				

SUPPORTING SCHEDULES:

B-2, pages 1-7

E-1

RECAP SCHEDULES:

B-1

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Original Cost Rate Base Proforma Adjustments

Exhibit
Schedule B-2
Page 2
Witness: Bourassa

Line No.		<u>Proforma Adjustments</u>					<u>Adjusted at end of Test Year</u>
		<u>Actual at End of Test Year</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	
			<u>Plant Adjustments</u>	<u>Accum. Depr.</u>	<u>Scottsdale Treatment</u>	<u>CIAC</u>	
1	Gross Utility Plant in Service	\$ 11,342,207	15,528				\$ 11,357,735
2							
3							
4	Less:						
5	Accumulated Depreciation	5,947,887		(322,862)			5,625,025
6							
7							
8							
9	Net Utility Plant in Service	\$ 5,394,320	\$ 15,528	\$ 322,862		\$ -	\$ 5,732,710
10							
11							
12	Less:						
13	Advances in Aid of Construction	1,457,009					1,457,009
14							
15							
16	Contributions in Aid of Construction (CIAC)	5,341,461			(109,322)		5,232,139
17							
18							
19	Accumulated Amort of CIAC	(4,485,415)			271,031		(4,214,384)
20							
21	Customer Meter Deposits	94,290					94,290
22	Deferred Income Taxes	-				(170,554)	(170,554)
23							
24							
25	Plus:						
26	Unamortized Finance Charges	-					-
27							
28	Deferred Reg. Assets	-			389,035		389,035
29	Allowance for Working Capital	-					-
30							
31	Total	\$ 2,986,975	\$ 15,528	\$ 322,862	\$ 389,035	\$ (161,709)	\$ 3,723,245
32							
33							
34							

SUPPORTING SCHEDULES:

B-2, pages 3-6
E-1

RECAP SCHEDULES:
B-1

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Original Cost Rate Base Proforma Adjustments
Adjustment Number 1

Line No.	Plant-in-Service	Acct.	No.	Description	Adjustments								Adjusted Original Cost	
					A Decision 69164 Capitalized Profits	B Decision 69164 Capitalized Expenses	C Decision 69164 Plant AIAC/CIAC	D Decision 69164 Retire Chlorinator	E Decision 69164 Allocated Computer Equip	F Removal of Affiliate Profit Since Last Test Year	G CIE Lift Station Retirement	H Difference to Computed Balance ¹		
1				Per Books										
2				Original Cost										
3														
4														
5														
6				351 Organization										
7				352 Franchises										
8				353 Land and Land Rights										
9				354 Structures and Improvements										
10				355 Power Generation Equipment										
11				360 Collection Sewers - Force										
12				361 Collection Sewers - Gravity										
13				362 Special Collecting Structures										
14				363 Services to Customers										
15				364 Flow Measuring Devices										
16				365 Flow Measuring Installations										
17				370 Receiving Wells										
18				371 Effluent Pumping Equipment										
19				380 Treatment and Disposal Equip.										
20				381 Plant Sewers										
21				382 Outfall Sewer Lines										
22				389 Other Plant and Misc. Equipment										
23				390 Office Furniture and Equipment										
24				391 Transportation Equipment										
25				393 Tools, Shop and Garage Equip.										
26				394 Laboratory Equipment										
27				395 Power Operated Equipment										
28				396 Communication Equipment										
29				Other Tangible Plant										
30				TOTALS										
31														
32				Plant-in-Service per Books										
33				Increase (decrease) in Plant-in-Service										
34				Adjustment to Plant-in-Service										
35														
36														

¹ Computed Balance as shown on B-2, page 3.4.

Black Mountain Sewer Corporation
Plant Additions and Retirements

Exhibit
Schedule B-2
Page 3.1

Account No.	Description	Deprec. Rate Before Dec-05	Deprec. Rate After Dec-05	Per Decision 69164		2005 Plant Additions	2005 Plant Adjustments ¹	2005 Adjusted Plant	2005 Plant Retirements	2005 Plant Balance	2005 Deprec.
				Plant At 12/31/2004	2004 Accum. Depr.						
351	Organization	0.0000%	0.00%	-	-	-	-	-	-	-	-
352	Franchises	0.0000%	0.00%	-	-	-	-	-	-	-	-
353	Land and Land Rights	0.0000%	0.00%	461,300	-	-	-	-	-	461,300	-
354	Structures and Improvements	5.0000%	3.33%	1,239,905	888,015	56,562	(1,917)	54,645	-	1,294,549	61,598
355	Power Generation Equipment	5.0000%	5.00%	-	706	-	-	-	-	-	(706)
360	Collection Sewers - Force	5.0000%	2.00%	568,413	154,483	94,624	(5,062)	89,562	-	657,976	29,127
361	Collection Sewers - Gravity	5.0000%	2.00%	3,614,544	2,488,740	297,571	(21,880)	275,691	-	3,890,235	178,238
362	Special Collecting Structures	5.0000%	2.00%	-	-	-	-	-	-	-	-
363	Services to Customers	5.0000%	2.00%	157,218	128,612	19,337	-	19,337	-	176,555	7,927
364	Flow Measuring Devices	5.0000%	10.00%	39,829	23,004	-	(8,135)	(8,135)	-	31,694	1,937
365	Flow Measuring Installations	5.0000%	10.00%	156,204	3,959	19,404	-	19,404	-	175,608	8,987
370	Receiving Wells	5.0000%	3.33%	696,137	199,051	-	-	-	-	696,137	33,838
371	Effluent Pumping Equipment	5.0000%	12.50%	453,558	244,706	11,119	-	11,119	-	464,677	25,825
380	Treatment and Disposal Equipment	5.0000%	5.00%	-	-	6,288	-	6,288	-	6,288	157
381	Plant Sewers	5.0000%	5.00%	123,289	84,017	-	-	-	-	123,289	6,164
382	Outfall Sewer Lines	5.0000%	3.33%	-	-	-	-	-	-	-	-
389	Other Plant and Misc. Equipment	5.0000%	6.67%	719,140	80,678	99,447	(7,527)	91,920	-	811,059	39,320
390	Office Furniture and Equipment	5.0000%	6.67%	220,360	27,165	1,465	-	1,465	-	221,825	11,362
391	Transportation Equipment	5.0000%	20.00%	87,811	7,642	-	-	-	-	87,811	5,488
393	Tools, Shop and Garage Equipment	5.0000%	5.00%	-	-	-	-	-	-	-	-
394	Laboratory Equipment	5.0000%	10.00%	7,279	352	209	-	209	-	7,488	400
395	Power Operated Equipment	5.0000%	5.00%	-	-	-	-	-	-	-	-
396	Communication Equipment	5.0000%	10.00%	-	-	-	-	-	-	-	-
398	Other Tangible Plant	5.0000%	10.00%	-	-	-	-	-	-	-	-
TOTAL WATER PLANT											
				8,544,987	4,331,129	606,025	(44,521)	561,504	-	9,106,490	409,863

¹ Affiliate Profit

Plant Held for Future Use
TOTAL WATER PLANT

Black Mountain Sewer Corporation
Plant Additions and Retirements

Exhibit
Schedule B-2
Page 3.2

Account	No.	Description	Deprec.	Deprec.	2006	2006	2006	2006	2006	2006
			Before Dec-05	Rate After Dec-05	Plant Additions	Plant Adjustments, ¹	Adjusted Plant Additions	Plant Retirements	Plant Balance	Deprec.
	351	Organization	0.0000%	0.00%					-	-
	352	Franchises	0.0000%	0.00%					-	-
	353	Land and Land Rights	0.0000%	0.00%					461,300	-
	354	Structures and Improvements	5.0000%	3.33%	3,625		3,625		1,298,175	43,169
	355	Power Generation Equipment	5.0000%	5.00%					-	-
	360	Collection Sewers - Force	5.0000%	2.00%	3,592		3,592		661,568	13,195
	361	Collection Sewers - Gravity	5.0000%	2.00%	112,559	(22,710)	89,849		3,980,083	78,703
	362	Special Collecting Structures	5.0000%	2.00%					-	-
	363	Services to Customers	5.0000%	2.00%	10,429		10,429		186,983	3,635
	364	Flow Measuring Devices	5.0000%	10.00%		(182)	(182)		31,512	3,160
	365	Flow Measuring Installations	5.0000%	10.00%	3,740		3,740		179,348	17,748
	370	Receiving Wells	5.0000%	3.33%	2,141		2,141		698,278	23,217
	371	Effluent Pumping Equipment	5.0000%	12.50%	44,676		44,676		509,353	60,877
	380	Treatment and Disposal Equipment	5.0000%	5.00%	12,184		12,184		18,472	619
	381	Plant Sewers	5.0000%	5.00%					123,289	6,164
	382	Outfall Sewer Lines	5.0000%	3.33%					-	-
	389	Other Plant and Misc. Equipment	5.0000%	6.67%	53,055	(740)	52,315		863,374	55,842
	390	Office Furniture and Equipment	5.0000%	6.67%					221,825	14,796
	391	Transportation Equipment	5.0000%	20.00%					87,811	17,562
	393	Tools, Shop and Garage Equipment.	5.0000%	5.00%					-	-
	394	Laboratory Equipment	5.0000%	10.00%					7,488	749
	395	Power Operated Equipment	5.0000%	5.00%					-	-
	396	Communication Equipment	5.0000%	10.00%					-	-
	398	Other TangiblePlant	5.0000%	10.00%					-	-
Plant Held for Future Use										
TOTAL WATER PLANT										339,437
					246,000	(23,632)	222,368	-	9,328,859	

¹ Affiliate Profit

Account No.	Description	Deprec. Rate Before Dec-05	Deprec. Rate After Dec-05	2007 Plant Additions	2007 Plant Adjustments ¹	2007 Adjusted Plant Additions	2007 Plant Retirements	2007 Plant Balance	2007 Deprec.
351	Organization	0.0000%	0.00%			-		-	-
352	Franchises	0.0000%	0.00%			-		-	-
353	Land and Land Rights	0.0000%	0.00%			-		-	-
354	Structures and Improvements	5.0000%	3.33%	1,539	(20,391)	(18,852)		461,300	42,915
355	Power Generation Equipment	5.0000%	5.00%					1,279,322	-
360	Collection Sewers - Force	5.0000%	2.00%	34,935	(2,469)	32,466		694,034	13,556
361	Collection Sewers - Gravity	5.0000%	2.00%	211,268	(32,273)	178,995		4,159,078	81,392
362	Special Collecting Structures	5.0000%	2.00%					-	-
363	Services to Customers	5.0000%	2.00%					186,983	3,740
364	Flow Measuring Devices	5.0000%	10.00%					31,512	3,151
365	Flow Measuring Installations	5.0000%	10.00%					179,348	17,935
370	Receiving Wells	5.0000%	3.33%					698,278	23,253
371	Effluent Pumping Equipment	5.0000%	12.50%	74,764	(5,336)	69,428		578,780	68,008
380	Treatment and Disposal Equipment	5.0000%	5.00%	4,387		4,387		22,859	1,033
381	Plant Sewers	5.0000%	5.00%					123,289	6,164
382	Outfall Sewer Lines	5.0000%	3.33%					-	-
389	Other Plant and Misc. Equipment	5.0000%	6.67%	784	(942)	(158)		863,216	57,582
390	Office Furniture and Equipment	5.0000%	6.67%	2,763		2,763		224,587	14,888
391	Transportation Equipment	5.0000%	20.00%	19,556		19,556		107,367	19,518
393	Tools, Shop and Garage Equipment	5.0000%	5.00%	3,493		3,493		3,493	87
394	Laboratory Equipment	5.0000%	10.00%					7,488	749
395	Power Operated Equipment	5.0000%	5.00%					-	-
396	Communication Equipment	5.0000%	10.00%					-	-
398	Other Tangible Plant	5.0000%	10.00%					-	-
Plant Held for Future Use									
TOTAL WATER PLANT				353,488	(61,411)	292,077	-	9,620,936	353,971

¹ Affiliate Profit

Black Mountain Sewer Corporation
Plant Additions and Retirements

Exhibit
Schedule B-2
Page 3.4

Account	Deprec. Rate Before Dec-05	Deprec. Rate After Dec-05	Jun.-Jun. 2008 Plant Additions	Jun.-Jun. 2008 Plant Adjustments ¹	Jun.-Jun. 2008 Adjusted Plant Additions	Jun.-Jun. 2008 Plant Retirements	June 30 2008 Plant Balance	Jun.-Jun. 2008 Deprec.
351 Organization	0.0000%	0.00%			-		-	-
352 Franchises	0.0000%	0.00%			-		-	-
353 Land and Land Rights	0.0000%	0.00%			-		461,300	-
354 Structures and Improvements	5.0000%	3.33%	1,290,255	(11,658)	1,278,597		2,557,920	31,945
355 Power Generation Equipment	5.0000%	5.00%			-		-	-
360 Collection Sewers - Force	5.0000%	2.00%	12,595	(337)	12,258		706,292	7,002
361 Collection Sewers - Gravity	5.0000%	2.00%	130,250	(4,380)	125,870		4,284,948	42,220
362 Special Collecting Structures	5.0000%	2.00%			-		-	-
363 Services to Customers	5.0000%	2.00%	11,739		11,739		198,723	1,929
364 Flow Measuring Devices	5.0000%	10.00%			-		31,512	1,576
365 Flow Measuring Installations	5.0000%	10.00%	430	(156)	274		179,622	8,974
370 Receiving Wells	5.0000%	3.33%	544	(311)	233	(7,883)	690,628	11,563
371 Effluent Pumping Equipment	5.0000%	12.50%	78,862	(2,798)	76,064		654,844	38,551
380 Treatment and Disposal Equipment	5.0000%	5.00%	129,937	(9,218)	120,719		143,578	2,080
381 Plant Sewers	5.0000%	5.00%			-		123,289	3,082
382 Outfall Sewer Lines	5.0000%	3.33%			-		-	-
389 Other Plant and Misc. Equipment	5.0000%	6.67%	79,092	(2,876)	76,216		939,432	30,059
390 Office Furniture and Equipment	5.0000%	6.67%			-		224,587	7,490
391 Transportation Equipment	5.0000%	20.00%			-		107,367	10,737
393 Tools, Shop and Garage Equipment.	5.0000%	5.00%	2,262		2,262		5,754	116
394 Laboratory Equipment	5.0000%	10.00%			-		7,488	374
395 Power Operated Equipment	5.0000%	5.00%			-		-	-
396 Communication Equipment	5.0000%	10.00%	40,451		40,451		40,451	1,011
398 Other TangiblePlant	5.0000%	10.00%			-		-	-
Plant Held for Future Use								
TOTAL WATER PLANT								
			1,776,417	(31,734)	1,744,683	(7,883)	11,357,735	198,708

¹ Affiliate Profit

Black Mountain Sewer Corporation
Plant Additions and Retirements

Exhibit
Schedule B-2
Page 3.5

Account	Deprec. Rate Before Dec-05	Deprec. Rate After Dec-05	Year End Accumulated Depreciation by Account				
			2004	2005	2006	2007	2008
351 Description Organization	0.0000%	0.00%	-	-	-	-	-
352 Franchises	0.0000%	0.00%	-	-	-	-	-
353 Land and Land Rights	0.0000%	0.00%	-	-	-	-	-
354 Structures and Improvements	5.0000%	3.33%	888,015	949,612	992,781	1,035,697	1,067,642
355 Power Generation Equipment	5.0000%	5.00%	706	-	-	-	-
360 Collection Sewers - Force	5.0000%	2.00%	154,483	183,610	196,805	210,361	217,363
361 Collection Sewers - Gravity	5.0000%	2.00%	2,488,740	2,666,978	2,745,682	2,827,073	2,869,293
362 Special Collecting Structures	5.0000%	2.00%	-	-	-	-	-
363 Services to Customers	5.0000%	2.00%	128,612	136,539	140,175	143,914	145,843
364 Flow Measuring Devices	5.0000%	10.00%	23,004	24,941	28,101	31,252	32,828
365 Flow Measuring Installations	5.0000%	10.00%	3,959	12,946	30,693	48,628	57,602
370 Receiving Wells	5.0000%	3.33%	199,051	232,889	256,106	279,359	283,038
371 Effluent Pumping Equipment	5.0000%	12.50%	244,706	270,532	331,408	399,417	437,968
380 Treatment and Disposal Equipment	5.0000%	5.00%	-	157	776	1,810	3,890
381 Plant Sewers	5.0000%	5.00%	84,017	90,181	96,346	102,510	105,592
382 Outfall Sewer Lines	5.0000%	3.33%	-	-	-	-	-
389 Other Plant and Misc. Equipment	5.0000%	6.67%	80,678	119,998	175,840	233,422	263,481
390 Office Furniture and Equipment	5.0000%	6.67%	27,165	38,527	53,323	68,210	75,700
391 Transportation Equipment	5.0000%	20.00%	7,642	13,130	30,692	50,210	60,947
393 Tools, Shop and Garage Equipment.	5.0000%	5.00%	-	-	-	87	203
394 Laboratory Equipment	5.0000%	10.00%	352	752	1,500	2,249	2,624
395 Power Operated Equipment	5.0000%	5.00%	-	-	-	-	-
396 Communication Equipment	5.0000%	10.00%	-	-	-	-	1,011
398 Other TangiblePlant	5.0000%	10.00%	-	-	-	-	-

Plant Held for Future Use
TOTAL WATER PLANT

4,331,129	4,740,792	5,080,229	5,434,200	5,625,025
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Line No.	Account No.	Description	Balance Per Company Per 2004 Filing Before Adj.	PTY Plant	Capitalized Profits	Adjustments per Decision 69164			Allocated Computer Equip	Plant per Decision 69164	Remove PTY Plant	Initial Balance
						Capitalized Expenses	AIAC/CIAC Plant	Retire Chlorinator				
1	351	Organization	-							-		-
2	352	Franchises								-		-
3	353	Land and Land Rights	461,446		(146)					461,300		461,300
4	354	Structures and Improvements	1,245,292		(5,387)					1,239,905		1,239,905
5	355	Power Generation Equipment	-							-		-
6	360	Collection Sewers - Force	228,785		(205)					568,413		568,413
7	361	Collection Sewers - Gravity	3,608,619		(1,361)		339,833			3,614,544		3,614,544
8	362	Special Collecting Structures	-				7,286			-		-
9	363	Services to Customers	158,802		(1,584)					157,218		157,218
10	364	Flow Measuring Devices	39,878		(49)					39,829		39,829
11	365	Flow Measuring Installations	158,358		(2,154)					156,204		156,204
12	370	Receiving Wells	696,506		(369)					696,137		696,137
13	371	Effluent Pumping Equipment	451,705		(360)		2,213			453,558		453,558
14	380	Treatment and Disposal Equipment	-				2,790			-		-
15	381	Plant Sewers	121,651		(1,152)					123,289		123,289
16	382	Outfall Sewer Lines	-							-		-
17	389	Other Plant and Misc. Equipment	738,804	85,699	(5,185)		5,059	(19,539)		804,839	(85,699)	719,140
18	390	Office Furniture and Equipment	365,512		(2,920)			(142,232)		220,360		220,360
19	391	Transportation Equipment	87,811							87,811		87,811
20	393	Tools, Shop and Garage Equipment.	-							-		-
21	394	Laboratory Equipment	7,279							7,279		7,279
22	395	Power Operated Equipment	-							-		-
23	398	Other TangiblePlant	-							-		-
24										-		-
25										-		-
26										-		-
27										-		-
28										-		-
29										-		-
30										-		-
31										-		-
32										-		-
33										-		-
TOTAL			8,370,448	85,699	(20,872)	17,348	339,833	(142,232)		8,630,686	(85,699)	8,544,987

Black Mountain Sewer Corporation
A/D Reconciliation to Prior Rate Case

Exhibit
Schedule B-2
Page 3.7

Line No.	Account No.	Description	Balance Per Company Per 2004 Filing Before Adj.	Adjustments per Decision 69164 Affiliate A/D	Retire Chlorinator	Blank	A/D per Decision 69164	PTY A/D	Initial Balance
1									
2									
3									
4									
5	351	Organization	-				-		-
6	352	Franchises	-				-		-
7	353	Land and Land Rights	-				-		-
8	354	Structures and Improvements	888,015				888,015		888,015
9	355	Power Generation Equipment	706				706		706
10	360	Collection Sewers - Force	154,483				154,483		154,483
11	361	Collection Sewers - Gravity	2,488,740				2,488,740		2,488,740
12	362	Special Collecting Structures	-				-		-
13	363	Services to Customers	128,612				128,612		128,612
14	364	Flow Measuring Devices	23,004				23,004		23,004
15	365	Flow Measuring Installations	3,959				3,959		3,959
16	370	Receiving Wells	199,051				199,051		199,051
17	371	Effluent Pumping Equipment	244,706				244,706		244,706
18	380	Treatment and Disposal Equipment	-				-		-
19	381	Plant Sewers	84,017				84,017		84,017
20	382	Outfall Sewer Lines	-				-		-
21	389	Other Plant and Misc. Equipment	100,217		(19,539)		80,678		80,678
22	390	Office Furniture and Equipment	42,876	(15,711)			27,165		27,165
23	391	Transportation Equipment	7,642				7,642		7,642
24	393	Tools, Shop and Garage Equipment.	-				-		-
25	394	Laboratory Equipment	352				352		352
26	395	Power Operated Equipment	-				-		-
27	398	Other Tangible Plant	-				-		-
28									
29									
30									
31									
32									
		TOTAL	4,366,379	(15,711)	(19,539)	-	4,331,129	-	4,331,129

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Original Cost Rate Base Proforma Adjustments
Adjustment Number 2

Exhibit
Schedule B-2
Page 4
Witness: Bourassa

Line No.	Plant-in-Service	Acct. No.	Description	Per Books Accum. Depr.	A Difference to Computed Balance	B Intentionally Left Blank	Adjusted Accum. Depr.
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							

SUPPORTING SCHEDULES

B-2, pages 3.5

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Original Cost Rate Base Proforma Adjustments
Adjustment 3

Exhibit
Schedule B-2
Page 5
Witness: Bourassa

Line

No.

1	<u>Additional Scottsdale Treatment Capacity</u>		
2			
3			
4	Cost of Additonal Scottsdale Treatment Capacity	\$	486,294
5	(acquired in June 2006)		
6			
7	Amortization period (years)	10	
8			
9	Annual amortization	\$	48,629
10			
11	Number of years to June 2008	2	
12			
13	Less: Amortization through June 2008	\$	97,259
14			
15	Unamortized balance	\$	389,035
16			
17			
18	Adjustment to deferred regulatory assets	\$	389,035

19
20
21
22
23
24
25
26
27
28
29
30

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Original Cost Rate Base Proforma Adjustments
Adjustment 4

Exhibit
Schedule B-2
Page 6
Witness: Bourassa

Line
No.

CIAC and Accumulated Amortization					Accumulated
		<u>CIAC</u>	<u>Rate</u>	<u>Amortization</u>	<u>Amortization</u>
1	Balance at 12/31/2004	\$ 4,857,632			3,256,134
2	(per Decision 69164)				3,256,134
3	Jan-Dec Amortization		5.00%	242,882	3,499,016
4	2005 Additions	301,511	2.50%	7,538	3,506,553
5					3,506,553
6	Balance at 12/31/2005	\$ 5,159,143			3,506,553
7	Jan-Dec Amortization		5.00%	257,957	3,764,511
8	2006 Additions	70,523	2.50%	1,763	3,766,274
9					3,766,274
10	Balance at 12/31/2006	\$ 5,229,666			3,766,274
11	Jan-Nov Amortization		5.00%	239,693	4,005,967
12	Dec Amortization		3.64%	15,857	4,021,824
13	2007 Additions	2,473	2.50%	57	4,021,880
14			1.82%	4	4,021,884
15	Balance at 12/31/2007	\$ 5,232,139			4,021,884
16	Jan-Dec Amortization		3.68%	192,499	4,214,384
17	2008 Additions	-	1.84%	-	4,214,384
18					4,214,384
19	Balance at 6/30/2008	<u>\$ 5,232,139</u>			<u>4,214,384</u>
20					
21					
22					
23					
24	Computed balance at 6/30/2008	\$ 5,232,139			\$ 4,214,384
25					
26	Book balance at 6/30/2008	<u>\$ 5,341,461</u>			<u>\$ 4,485,415</u>
27					
28	Increase (decrease)	\$ (109,322)			\$ (271,031)
29					
30					
31					
32	Adjustment to CIAC	<u>\$ (109,322)</u>			<u>\$ 271,031</u>
33	Label	4a			4b
34					
35					
36					
37					
38					
39					

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Original Cost Rate Base Proforma Adjustments
Adjustment 5

Exhibit
Schedule B-2
Page 7
Witness: Bourassa

Line No.		Adjusted Book Value ¹	Tax Value	Probability of Realization of Future Tax Benefit	Deductible TD (Taxable TD) Expected to be Realized	Tax Rate	Future Tax Asset Current	Future Tax Asset Non Current	Future Tax Liability Current	Future Tax Liability Non Current
1	<u>Deferred Income Tax as of June 30, 2008.</u>									
2										
3										
4										
5										
6	Plant-in-Service	\$ 11,357,735								
7	Accum. Deprec.	(5,625,025)								
8	CIAC	(1,017,755)								
9	Fixed Assets	\$ 4,714,955	\$ 3,699,796	100.0%	\$ (1,015,159)	38.6%				\$ (391,851)
10	AIAC	\$ (1,457,009)	-	100.0%	\$ 1,457,009	38.6%	\$ 562,405			
11										
12										
13										
14										
15										
16										
17										
18							\$ -	\$ 562,405	\$ -	\$ (391,851)
19										
20										
21										
22										
23										
24										

Net Asset (Liability)

Adjustment to DJT

¹ Adjusted per B-2

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Computation of Working Capital

Exhibit
Schedule B-5
Page 1
Witness: Bourassa

Line

No.

1	Cash Working Capital (1/8 of Allowance		
2	Operation and Maintenance Expense)	\$	153,565
3	Pumping Power (1/24 of Pumping Power)		29
4	Purchased Water (1/24 of Purchased Water)		13,969
5	Prepays		17,326
6	Materials & Supplies		-
7			
8			
9	Total Working Capital Allowance	\$	184,889
10			
11			
12	Working Capital Requested	\$	-
13			
14			
15	<u>SUPPORTING SCHEDULES:</u>	<u>RECAP SCHEDULES:</u>	
16	E-1	B-1	
17			

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Income Statement

Exhibit
Schedule C-1
Page 1
Witness: Bourassa

Line No.		Test Year Book Results	Label	Adjustment	Test Year Adjusted Results	Proposed Rate Increase	Adjusted with Rate Increase
1	Revenues						
2	Flat Rate Revenues	\$ 1,555,192	5	\$ 2,145	\$ 1,557,337	\$ 913,762	\$ 2,471,099
3	Measured Revenues	15,917			15,917		15,917
4	Other Wastewater Revenues	6,916			6,916		6,916
5		<u>\$ 1,578,025</u>		<u>\$ 2,145</u>	<u>\$ 1,580,170</u>	<u>\$ 913,762</u>	<u>\$ 2,493,932</u>
6	Operating Expenses						
7	Salaries and Wages	\$ -			\$ -		\$ -
8	Purchased Wastewater Treatment	300,408	6/7	34,847	335,255		335,255
9	Sludge Removal Expense	706			706		706
10	Purchased Power	54,522	10	168	54,690		54,690
11	Fuel for Power Production	928			928		928
12	Chemicals	34,152	8/9	3,337	37,489		37,489
13	Materials and Supplies	11,224			11,224		11,224
14	Contractual Services	9,362			9,362		9,362
15	Contractual Services- Testing	16,955			16,955		16,955
16	Contractual Services - Other	502,741	11	50,302	553,043		553,043
17	Equipment Rental	1,863			1,863		1,863
18	Rents - Building	19,830			19,830		19,830
19	Transportation Expenses	34,445			34,445		34,445
20	Insurance - General Liability	18,704			18,704		18,704
21	Insurance - Other	990			990		990
22	Regulatory Commission Expense	59,884	4	116	60,000		60,000
23	Miscellaneous Expense	20,845			20,845		20,845
24	Bad Debt Expense	11,962			11,962		11,962
25	Scottsdale Capacity (Operating Lease)	-	3	164,522	164,522		164,522
26	Amort. of Additional Scottsdale Cap.	-	12	48,629	48,629		48,629
27	Depreciation and Amortization	181,931	1	42,887	224,818		224,818
28	Taxes Other Than Income	(1,780)			(1,780)		(1,780)
29	Property Taxes	19,302	2	13,112	32,414		32,414
30	Income Tax	125,431	14	(117,671)	7,760	352,702	360,462
31					-		-
32	Total Operating Expenses	<u>\$ 1,424,405</u>		<u>\$ 240,250</u>	<u>\$ 1,664,655</u>	<u>\$ 352,702</u>	<u>\$ 2,017,356</u>
33	Operating Income	<u>\$ 153,620</u>		<u>\$ (238,105)</u>	<u>\$ (84,485)</u>	<u>\$ 561,060</u>	<u>\$ 476,575</u>
34	Other Income (Expense)						
35	Interest Income	-			-		-
36	Other income	-			-		-
37	Interest Expense	(98,285)	13	30,592	(67,693)		(67,693)
38	Other Expense	-			-		-
39							
40	Total Other Income (Expense)	<u>\$ (98,285)</u>		<u>\$ 30,592</u>	<u>\$ (67,693)</u>	<u>\$ -</u>	<u>\$ (67,693)</u>
41	Net Profit (Loss)	<u>\$ 55,335</u>		<u>\$ (207,513)</u>	<u>\$ (152,178)</u>	<u>\$ 561,060</u>	<u>\$ 408,882</u>

SUPPORTING SCHEDULES:

C-2

E-2

RECAP SCHEDULES:

A-1

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Adjustments to Revenues and Expenses

Exhibit
Schedule C-2
Page 1
Witness: Bourassa

Line No.	1	2	3	4	5	6	Subtotal
	Depreciation Expense	Property Taxes	Scottsdale Treatment Capacity	Rate Case Expense	Revenue Annualization	Purchased WW Treatment	
2					2,145		2,145
3							
4							
5	Revenues	42,887	13,112	164,522	116	33,845	254,482
6	Expenses						
7	Operating Income	(42,887)	(13,112)	(164,522)	(116)	(33,845)	(252,337)
8							
9							
10	Interest						
11	Expense						
12	Other						
13	Income /						
14	Expense						
15							
16	Net Income	(42,887)	(13,112)	(164,522)	(116)	(33,845)	(252,337)
17							
18							
19							
20							
21							
22							
23	Revenues						
24	Expenses	1,002	2,943	394	168	48,629	357,921
25							
26	Operating Income	(1,002)	(2,943)	(394)	(168)	(48,629)	(355,776)
27							
28							
29	Interest						
30	Expense						
31	Other						
32	Income /						
33	Expense						
34							
35	Net Income	(1,002)	(2,943)	(394)	(168)	(48,629)	(355,776)
36							
37							
38							
39							
40							
41	Revenues						
42	Expenses						
43							
44							
45	Operating Income	-	117,671	-	-	-	(238,105)
46							
47							
48	Interest						
49	Expense						
50	Other	30,592					30,592
51	Income /						
52	Expense						
53							
54	Net Income	30,592	117,671	-	-	-	(207,513)

Adjustments to Revenues and Expenses

Line No.	7	8	9	10	11	12	Subtotal
	Annualization WW Treatment	Increase in Chemicals Exp.	Annualization of Chemicals Exp.	Annualization Purchased Power	Contractual Services	Amortization Trmnt Cap.	
21							2,145
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
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39							
40							
41							
42							
43							
44							
45							
46							
47							
48							
49							
50							
51							
52							
53							
54							

Adjustments to Revenues and Expenses

Line No.	13	14	15	16	17	18	Total
	Interest Synchronization	Income Taxes					
41							2,145
42							
43							
44							
45							
46							
47							
48							
49							
50							
51							
52							
53							
54							

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Adjustments to Revenues and Expenses
Adjustment Number 1

Exhibit
Schedule C-2
Page 2
Witness: Bourassa

Line
No.

1	<u>Depreciation Expense</u>		
2			
3	Acct.	Adjusted	Depreciation
4	<u>No.</u> <u>Description</u>	<u>Original</u> <u>Cost</u>	<u>Proposed</u> <u>Rates</u> <u>Expense</u>
5	351 Organization	-	0.00% -
6	352 Franchises	-	0.00% -
7	353 Land and Land Rights	461,300	0.00% -
8	354 Structures and Improvements	2,557,920	3.33% 85,179
9	355 Power Generation Equipment	-	5.00% -
10	360 Collection Sewers - Force	706,292	2.00% 14,126
11	361 Collection Sewers - Gravity	4,284,948	2.00% 85,699
12	362 Special Collecting Structures	-	2.00% -
13	363 Services to Customers	198,723	2.00% 3,974
14	364 Flow Measuring Devices	31,512	10.00% 3,151
15	365 Flow Measuring Installations	179,622	10.00% 17,962
16	370 Receiving Wells	690,628	3.33% 22,998
17	371 Effluent Pumping Equipment	654,844	12.50% 81,855
18	380 Treatment and Disposal Equipment	143,578	5.00% 7,179
19	381 Plant Sewers	123,289	5.00% 6,164
20	382 Outfall Sewer Lines	-	3.33% -
21	389 Other Plant and Misc. Equipment	939,432	6.67% 62,660
22	390 Office Furniture and Equipment	224,587	6.67% 14,980
23	391 Transportation Equipment	107,367	20.00% 21,473
24	393 Tools, Shop and Garage Equipment.	5,754	5.00% 288
25	394 Laboratory Equipment	7,488	10.00% 749
26	395 Power Operated Equipment	-	5.00% -
27	396 Communication Equipment	40,451	10.00% 4,045
28	398 Other TangiblePlant	-	10.00% -
29	TOTALS	<u>\$ 11,357,735</u>	<u>\$ 432,483</u>
30			
31	Less: Amortization of Contributions	\$ 5,232,139	3.9690% \$ (207,665)
32			
33	Total Depreciation Expense		<u>\$ 224,818</u>
34			
35	Test Year Depreciation Expense		<u>181,931</u>
36			
37	Increase (decrease) in Depreciation Expense		<u>42,887</u>
38			
39	Adjustment to Revenues and/or Expenses		<u>\$ 42,887</u>
40			
41	<u>SUPPORTING SCHEDULE</u>		
42	B-2, page 3		

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Adjustment to Revenues and/or Expenses
Adjustment Number 2

Exhibit
Schedule C-2
Page 3
Witness: Bourassa

Line
No.

1	<u>Adjust Property Taxes to Reflect Proposed Revenues:</u>	
2		
3	Adjusted Revenues in year ended 06/30/2008	\$ 1,580,170
4	Adjusted Revenues in year ended 06/30/2008	1,580,170
5	Proposed Revenues	<u>2,493,932</u>
6	Average of three year's of revenue	\$ 1,884,757
7	Average of three year's of revenue, times 2	\$ 3,769,515
8	Add:	
9	Construction Work in Progress at 10%	\$ 14,202
10	Deduct:	
11	Book Value of Transportation Equipment	<u>46,420</u>
12		
13	Full Cash Value	\$ 3,723,094
14	Assessment Ratio	<u>21%</u>
15	Assessed Value	781,850
16	Property Tax Rate	4.1459%
17		
18	Property Tax	32,414
19	Tax on Parcels	0
20		
21	Total Property Tax at Proposed Rates	\$ 32,414
22	Property taxes in the test year	<u>19,302</u>
23	Change in property taxes	<u>\$ 13,112</u>
24		
25		
26	Adjustment to Revenues and/or Expenses	<u>\$ 13,112</u>
27		
28		

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Adjustment to Revenues and/or Expenses
Adjustment Number 3

Exhibit
Schedule C-2
Page 4
Witness: Bourassa

Line No.			
1	<u>Calculation of Lease Costs on Scottsdale Treatment Capacity</u>		
2			
3	Treatment Capacity Costs per Decision 59944	\$	1,260,000
4	Less Amount Funded by CIAC		<u>(300,000)</u>
5	Net Amount Funded by Debt	\$	960,000
6			
7	Annual debt service		
8	Interest Rate		9.40%
9	Term (years)		20.00
10	Annual Debt Service	\$	108,179
11	Annual 'Lease Expense'		\$ 108,179
12			
13			
14	Additional Scottsdale Capacity per Decision 60240	\$	653,706
15	Less Amount Funded by CIAC		<u>(153,706)</u>
16	Net Amount Funded by Debt	\$	500,000
17			
18	Annual debt service		
19	Interest Rate		9.40%
20	Term (years)		20.00
21	Annual Debt Service	\$	56,343
22	Annual 'Lease Expense'		<u>\$ 56,343</u>
23			
24	Total Annual 'Lease Expense'		\$ 164,522
25			
26			
27			
28			
29	Adjustment to Revenues and/or Expense		<u>\$ 164,522</u>
30			
31			
32			
33			
34			

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Adjustment to Revenues and/or Expenses
Adjustment Number 4

Exhibit
Schedule C-2
Page 5
Witness: Bourassa

Line

No.

1	<u>Rate Case Expense</u>	
2		
3	Estimated Rate Case Expense	\$ 180,000
4		
5	Estimated Amortization Period in Years	3
6		
7	Annual Rate Case Expense	<u>\$ 60,000</u>
8		
9	Test Year Rate Case Expense	\$ 59,884
10		
11	Increase(decrease) Rate Case Expense	<u>\$ 116</u>
12		
13	Adjustment to Revenue and/or Expense	<u>\$ 116</u>
14		
15		
16		
17		
18		
19		
20		

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Adjustment to Revenues and/or Expenses
Adjustment Number 5

Exhibit
Schedule C-2
Page 6
Witness: Bourassa

Line

No.

1 Revenue Annualization

2

3

4 Revenue Annualization

\$ 2,145

5

6

7

8 Total Revenue from Annualization

\$ 2,145

9

10

11 Adjustment to Revenue and/or Expense

\$ 2,145

12

13 SUPPORTING SCHEDULES

14 C-2 pages 6.1

15 H-1

16

17

18

19

20

Black Mountain Sewer Corporation
Revenue Annualization to Year-end Number of Customers
Residential

Exhibit
Schedule C-2
Page 6.1
Witness: Bourassa

Line No.		Month Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
1	Year End Number of Customers	1,972	1,972	1,972	1,972	1,972	1,972
2	Actual Customers	1,964	1,960	1,955	1,959	1,961	1,967
3	Increase in Number of Customers/Bills	8	12	17	13	11	5
4	Average Revenue / Present Rates	\$ 45.64	\$ 45.64	\$ 45.64	\$ 45.64	\$ 45.64	\$ 45.64
5	Revenue Annualization / Present Rates	\$ 365	\$ 548	\$ 776	\$ 593	\$ 502	\$ 228
6							
7	Increase in Number of Customers	8	12	17	13	11	5
8	Average Revenue / Proposed Rates	\$ 71.08	\$ 71.08	\$ 71.08	\$ 71.08	\$ 71.08	\$ 71.08
9	Revenue Annualization / Proposed Rates	\$ 569	\$ 853	\$ 1,208	\$ 924	\$ 782	\$ 355
10							
11							
12							
13							
14							

	Month Jan-08	Feb-08	Mar-08	Apr-08	May-08	Total Year
15	1,972	1,972	1,972	1,972	1,972	
16	1,975	1,968	1,975	1,978	1,983	
17	(3)	4	(3)	(6)	(11)	47
18	\$ 45.64	\$ 45.64	\$ 45.64	\$ 45.64	\$ 45.64	
19	\$ (137)	\$ 183	\$ (137)	\$ (274)	\$ (502)	\$ 2,145
20						
21	(3)	4	(3)	(6)	(11)	
22	\$ 71.08	\$ 71.08	\$ 71.08	\$ 71.08	\$ 71.08	
23	\$ (213)	\$ 284	\$ (213)	\$ (426)	\$ (782)	\$ 3,341
24						

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Adjustment to Revenues and/or Expenses
Adjustment Number 6

Line No.	City of Scottsdale Purchased Wastewater Treatment									
	Month	Year	Read Date	Sewage Flow (in gals)	Cost per 1,000 gal	Raw Billing	Environmental 18.953%	Subject to Sales tax	Sales tax 1.65%	Scottsdale Billing
1	July	2007	1-Aug-07	6,126,317	\$ 2.39	\$ 14,641.90	\$ 2,775.08	\$ 17,416.98	\$ 287.38	\$ 17,704.36
2	Aug	2007	1-Sep-07	7,000,000	\$ 2.39	\$ 16,730.00	\$ 3,170.84	\$ 19,900.84	\$ 328.36	\$ 20,229.20
3	Sept	2007	1-Oct-07	8,507,019	\$ 2.39	\$ 20,331.78	\$ 3,853.48	\$ 24,185.26	\$ 399.06	\$ 24,584.31
4	Oct	2007	1-Nov-07	8,800,000	\$ 2.39	\$ 21,032.00	\$ 3,986.19	\$ 25,018.19	\$ 412.80	\$ 25,431.00
5	Nov	2007	1-Dec-07	8,703,535	\$ 2.39	\$ 20,801.45	\$ 3,942.50	\$ 24,743.95	\$ 408.28	\$ 25,152.22
6	Dec	2007	1-Jan-08	8,936,845	\$ 2.39	\$ 21,359.06	\$ 4,048.18	\$ 25,407.24	\$ 419.22	\$ 25,826.46
7	Jan	2008	1-Feb-08	9,500,000	\$ 2.26	\$ 21,470.00	\$ 4,069.21	\$ 25,539.21	\$ 421.40	\$ 25,960.61
8	Feb	2008	1-Mar-08	11,347,179	\$ 2.26	\$ 25,644.62	\$ 4,860.43	\$ 30,505.05	\$ 503.33	\$ 31,008.38
9	Mar	2008	1-Apr-08	11,644,059	\$ 2.26	\$ 26,315.57	\$ 4,987.59	\$ 31,303.16	\$ 516.50	\$ 31,819.67
10	April	2008	1-May-08	9,597,371	\$ 2.26	\$ 21,690.06	\$ 4,110.92	\$ 25,800.98	\$ 425.72	\$ 26,226.69
11	May	2008	1-Jun-08	7,261,758	\$ 2.26	\$ 16,411.57	\$ 3,110.49	\$ 19,522.06	\$ 322.11	\$ 19,844.17
12	June	2008	1-Jul-08	6,333,090	\$ 2.26	\$ 14,312.78	\$ 2,712.70	\$ 17,025.49	\$ 280.92	\$ 17,306.41
13	Test Year Totals			103,757,173		\$ 240,740.79	\$ 45,627.60	\$ 286,368.40	\$ 4,725.08	\$ 291,093.48
14	Computation of Billings under rate change effective (7/1/2008)									
15	City of Scottsdale billing with new rate			103,757,173	\$ 2.59	\$ 268,731.08	\$ 50,932.60	\$ 319,663.68	\$ 5,274.45	\$ 324,938.13
16	Increase(decrease) in City of Scottsdale purchased wastewater treatment									
17	Adjustment to Revenues and/or Expenses									\$ 33,844.65
18										\$ 33,845

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Adjustment to Revenues and/or Expenses
Adjustment Number 7

Exhibit
Schedule C-2
Page 8
Witness: Bourassa

Line
No.

1	<u>Annualize Purchased Wastewater Treatment</u>	
2		
3	Adjusted Year Purchased Wastewater Treatment (Scottsdale)	\$ 324,938
4	Gallons Treated By Scottsdale (in 1000's)	103,757
5	Cost per 1,000 gallons	\$ 3.13
6		
7	Additional Wasterwater gallons (in 1,000's) from revenue annualization	451
8	Percent diverted to Scottsdale	70.94%
9	Additonal gallons treated by Scottsdale (in 1,000's)	320
10		
11	Increase (decrease) in Purchased Wastewater Treatment	<u>\$ 1,002</u>
12		
13		
14		
15		
16	Adjustment to Revenue and/or Expense	<u>\$ 1,002</u>
17		
18		
19		
20	<u>SUPPORTING SCHEDULE</u>	
21	C-2, page 7	
22		
23		
24		
25		

Black Mountain Sewer Corporation
Test Year Ended December 31, 2001
Adjustment to Revenues and/or Expenses
Adjustment Number 8

Exhibit
Schedule C-2
Page 9
Witness: Bourassa

Line
No.

1

2 Chemicals Expense¹

3

4 Thiogard used from July to November 2007

\$ 8,169

5 Sodium Hydroxide (ordor control chemical)

6 Gallons used during test year (approx. 7 months)

6,547

7 Cost per Gallons

\$ 1.65

8 Cost of Sodium Hydroxide

\$ 10,803

9 Delivery costs (14 deliveries at \$35 per)

490

10 Total Cost

\$ 19,461

11

12

13 Sodium Hydroxide (ordor control chemical)

14 Prjected gallons (test year gallons annualized to 12 months)

11,223

15 Cost per Gallons

\$ 1.90

16 Total Cost

\$ 21,325

17 Delivery costs (24 deliveries at \$45 per)

1,080

18 Total Cost

\$ 22,405

19

20

21 Increase (decrease) in Ordor Control Checmical Expense

\$ 2,943

22

23

24

25

26

27

28 ¹Company switched from Thiogard to Alkali (Sodicaum Hydroxide) in Nov. 2007. For first 7 months the

29 Company used 6,547 gallons. The annualized gallons is 11,223.

30

31

32

Black Mountain Sewer Corporation
Test Year Ended December 31, 2001
Adjustment to Revenues and/or Expenses
Adjustment Number 9

Exhibit
Schedule C-2
Page 10
Witness: Bourassa

Line

No.

1			
2	<u>Annualize Chemicals Expense</u>		
3			
4	Test Year Chemicals plus Adjustment #8	\$	37,095
5	Gallons Treated By BMSC (in 1000's)		42,510
6	Cost per 1,000 gallons	\$	0.87
7			
8	Additonal Wasterwater gallons (in 1,000's) from revenue annualization		451
9			
10	Additonal cost based on revenue annualization	\$	394
11			
12	Increase (decrease) in Chemicals Expense	\$	<u>394</u>
13			
14			
15			
16			
17	Adjustment to Revenue and/or Expense	\$	<u><u>394</u></u>
18			
19			
20			

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Adjustment to Revenues and Expenses
Adjustment Number 10

Exhibit
Schedule C-2
Page 11
Witness: Bourassa

Line

No.

1			
2	<u>Annualize Purchased Power</u>		
3			
4	Test Year Purchased Power	\$	54,522
5	Total Flow Gallons (in 1000's)		146,267
6	Cost per 1,000 gallons	\$	0.37
7			
8	Additonal Wasterwater gallons (in 1,000's) from revenue annualization		451
9			
10	Additonal cost based on revenue annualization	\$	168
11			
12	Increase (decrease) in Purchased Power	\$	<u>168</u>
13			
14			
15			
16			
17	Adjustment to Revenue and/or Expense	\$	<u><u>168</u></u>
18			
19			
20			

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Adjustment to Revenues and Expenses
Adjustment Number 11

Exhibit
Schedule C-2
Page 12
Witness: Bourassa

Line

No.

1			
2	<u>Contractual Services</u>		
3			
4	Increase in direct allocated Operations costs		\$ 3,474
5			
6	Increase in allocated Accounting/Billing costs	\$ 360,981	
7	Allocation Factor based on Year-end Customers	3.18%	
8			\$ 11,492
9	Increase in allocated Overhead costs	781,239	
10	Allocation Factor based on 4-factor allocation	4.52%	
11			\$ 35,336
12			
13	Total increase (decrease) in Contractual Services		\$ 50,302
14			
15			
16			
17	Adjustment to Revenue and/or Expense		\$ 50,302
18			
19			
20			

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Adjustment to Revenues and Expenses
Adjustment Number 12

Exhibit
Schedule C-2
Page 13
Witness: Bourassa

Line

No.

1

2 Amortization of Additional Scottsdale Treatment Capacity

3

4 Additional Scottsdale Treatment Capacity

\$ 486,294

5

6 Amortization period (years)

10

7

8 Annual Amortization

\$ 48,629

9

10

11

12 Adjustment to Revenue and/or Expense

\$ 48,629

13

14

15

16

17

18

19

20

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Adjustment to Revenues and Expenses
Adjustment Number 13

Exhibit
Schedule C-2
Page 14
Witness: Bourassa

Line
No.

1 Interest Synchronization

2

3

4 Fair Value Rate Base \$3,723,245

5 Weighted Cost of Debt 1.82%

6 Interest Expense \$ 67,693

7

8 Test Year Interest Expense \$ 98,285

9

10 Increase (decrease) in Interest Expense (30,592)

11

12

13

14 Adjustment to Revenue and/or Expense \$ 30,592

15

16

17 Weighted Cost of Debt Computation

18

19

	<u>Amount</u>	<u>Percent</u>	<u>Cost</u>	<u>Weighted Cost</u>
--	---------------	----------------	-------------	----------------------

20 Debt	\$ 1,010,649	19.34%	9.40%	1.82%
---------	--------------	--------	-------	-------

21 Equity	\$ 4,214,556	80.66%	12.80%	10.32%
-----------	--------------	--------	--------	--------

22 Total	\$ 5,225,205	100.00%		12.14%
----------	--------------	---------	--	--------

23

24

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Adjustment to Revenues and/or Expenses
Adjustment Number 14

Exhibit
Schedule C-2
Page 15
Witness: Bourassa

Line

No.

1	<u>Income Tax Computation</u>			
2				
3		Test Year	Test Year	Adjusted
4		Book	Adjusted	with Rate
5		Results	Results	Increase
6				
7	Taxable Income before Scottsdale Operating	\$ 180,766	\$ (144,418)	\$ 769,344
8	Plus: Scottsdale Operating Lease	-	164,522	164,522
9	Taxable Income	<u>\$ 180,766</u>	<u>\$ 20,104</u>	<u>\$ 933,866</u>
10				
11				
12				
13	Income Before Taxes	<u>\$ 180,766</u>	<u>\$ 20,104</u>	<u>\$ 933,866</u>
14				
15	Arizona Income Before Taxes	\$ 180,766	\$ 20,104	\$ 933,866
16				
17	Less Arizona Income Tax	<u>\$ 12,596</u>	<u>\$ 1,401</u>	<u>\$ 65,072</u>
18	Rate = 6.97%			
19	Arizona Taxable Income	\$ 168,170	\$ 18,703	\$ 868,794
20				
21	Arizona Income Taxes	\$ 12,596	\$ 1,401	\$ 65,072
22				
23	Federal Income Before Taxes	\$ 180,766	\$ 20,104	\$ 933,866
24				
25	Less Arizona Income Taxes	<u>\$ 12,596</u>	<u>\$ 1,401</u>	<u>\$ 65,072</u>
26				
27	Federal Taxable Income	<u>\$ 168,170</u>	<u>\$ 18,703</u>	<u>\$ 868,794</u>
28				
29				
30				
31	FEDERAL INCOME TAXES:			
32	15% BRACKET	\$ 7,500	\$ 2,805	\$ 7,500
33	25% BRACKET	\$ 6,250	\$ -	\$ 6,250
34	34% BRACKET	\$ 8,500	\$ -	\$ 8,500
35	39% BRACKET	\$ 26,586	\$ -	\$ 91,650
36	34% BRACKET	\$ -	\$ -	\$ 181,490
37		Rate	Rate	Rate
38	Federal Income Taxes	<u>\$ 48,836</u> 27.02%	<u>\$ 2,805</u> 13.95%	<u>\$ 295,390</u> 31.63%
39				
40				
41	Total Income Tax	<u>\$ 61,432</u>	<u>\$ 4,206</u>	<u>\$ 360,462</u>
42				
43	Overall Tax Rate	<u>33.98%</u>	<u>20.92%</u>	<u>38.60%</u>
44				
45	Income Tax at Proposed Rates Effective Rate	→ <u>\$ 7,760</u>		
46				

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Computation of Gross Revenue Conversion Factor

Exhibit
Schedule C-3
Page 1
Witness: Bourassa

Line No.	Description	Percentage of Incremental Gross Revenues
1	Federal Income Taxes	31.63%
2		
3	State Income Taxes	6.97%
4		
5	Other Taxes and Expenses	<u>0.00%</u>
6		
7		
8	Total Tax Percentage	38.60%
9		
10	Operating Income % = 100% - Tax Percentage	61.40%
11		
12		
13		
14		
15	<u>1</u> = Gross Revenue Conversion Factor	
16	Operating Income %	1.6286
17		
18	<u>SUPPORTING SCHEDULES:</u>	<u>RECAP SCHEDULES:</u>
19		A-1
20		

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Comparative Balance Sheets

Exhibit
Schedule E-1
Page 1
Witness: Bourassa

Line No.		Test Year Ended 6/30/2008	Year Ended 6/30/2007	Year Ended 6/30/2006
1	<u>ASSETS</u>			
2	Plant In Service	\$ 11,342,207	\$ 9,223,235	\$ 9,119,420
3	Non-Utility Plant	-	-	-
4	Scottsdale Treatment Capacity	2,400,000	2,400,000	2,400,000
5	Construction Work in Progress	142,018	564,837	93,538
6	Less: Accumulated Depreciation	(5,947,887)	(5,498,929)	(5,062,263)
7	Net Plant	<u>\$ 7,936,338</u>	<u>\$ 6,689,143</u>	<u>\$ 6,550,695</u>
8				
9	Debt Reserve Fund	\$ -	\$ -	\$ -
10				
11	<u>CURRENT ASSETS</u>			
12	Cash and Equivalents	\$ 33,796	\$ 27,437	\$ 116,779
13	Restricted Cash	(4,953)	(4,953)	356,412
14	Accounts Receivable, Net	30,351	35,697	33,362
15	Accounts Receivable -Other	12,080	12,109	10,152
16	Materials and Supplies	-	-	-
17	Prepayments	17,326	8,075	9,444
18	Other Current Assets	163,791	180,474	176,876
19	Total Current Assets	<u>\$ 252,391</u>	<u>\$ 258,839</u>	<u>\$ 703,025</u>
20				
21	Deferred Debits	\$ -	\$ -	\$ -
22				
23	Other Investments & Special Funds	\$ -	\$ -	\$ -
24				
25	TOTAL ASSETS	<u>\$ 8,188,729</u>	<u>\$ 6,947,982</u>	<u>\$ 7,253,720</u>
26				
27				
28	<u>LIABILITIES AND STOCKHOLDERS' EQUITY</u>			
29				
30	Common Equity	\$ 3,772,970	\$ 3,072,632	\$ 1,850,199
31				
32	Long-Term Debt	<u>\$ 1,010,649</u>	<u>\$ 1,074,188</u>	<u>\$ 1,132,046</u>
33				
34	<u>CURRENT LIABILITIES</u>			
35	Accounts Payable	\$ 16,146	\$ 6,193	\$ 15,074
36	Current Portion of Long-Term Debt	-	-	-
37	Payables to Associated Companies	748,526	95,275	534,898
38	Customer Meter Deposits, Current	-	-	-
39	Accrued Taxes	10,393	18,810	18,187
40	Accrued Interest	-	-	-
41	Other Current Liabilities	222,700	29,514	68,353
42	Total Current Liabilities	<u>\$ 997,765</u>	<u>\$ 149,792</u>	<u>\$ 636,512</u>
43	<u>DEFERRED CREDITS</u>			
44	Customer Meter Deposits, less current	\$ 94,290	\$ 105,911	\$ 73,079
45	Advances in Aid of Construction	1,457,009	1,424,859	1,371,859
46	Accumulated Deferred Income Taxes	-	-	-
47	Contributions In Aid of Construction, Net	5,341,461	5,338,988	6,127,712
48	Accumulated Amortization of CIAC	(4,485,415)	(4,218,388)	(3,937,687)
49	Asset Retirement Obligations	-	-	-
50	Total Deferred Credits	<u>\$ 2,407,345</u>	<u>\$ 2,651,370</u>	<u>\$ 3,634,963</u>
51				
52	Total Liabilities & Common Equity	<u>\$ 8,188,729</u>	<u>\$ 6,947,982</u>	<u>\$ 7,253,720</u>
53				
54	<u>SUPPORTING SCHEDULES:</u>			
55	E-5			
56				

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Comparative Income Statements

Exhibit
Schedule E-2
Page 1
Witness: Bourassa
Revised

Line No.		Test Year Ended 6/30/2008	Prior Year Ended 6/30/2007	Prior Year Ended 6/30/2006
1	Revenues			
2	Flat Rate Revenues	\$ 1,555,192	\$ 1,420,175	\$ 1,251,398
3	Measured Revenues	15,917	16,019	14,692
4	Other Wastewater Revenues	6,916	9,946	20,284
5	Total Revenues	<u>\$ 1,578,025</u>	<u>\$ 1,446,140</u>	<u>\$ 1,286,374</u>
6	Operating Expenses			
7	Salaries and Wages	\$ -	\$ -	\$ -
8	Purchased Wastewater Treatment	300,408	250,264	209,919
9	Sludge Removal Expense	706	737	1,212
10	Purchased Power	54,522	54,232	44,702
11	Fuel for Power Production	928	-	-
12	Chemicals	34,152	69,037	62,384
13	Materials and Supplies	11,224	10,086	16,903
14	Contractual Services	9,362	4,639	5,503
15	Contractual Services- Testing	16,955	27,041	10,789
16	Contractual Services - Other	502,741	392,538	295,686
17	Equipment Rental	1,863	769	1,047
18	Rents - Building	19,830	2,321	2,786
19	Transportation Expenses	34,445	16,591	5,299
20	Insurance - General Liability	18,704	20,160	12,055
21	Insurance - Other	990	2,139	4,633
22	Regulatory Commission Expense	59,884	51,852	14,048
23	Miscellaneous Expense	20,845	26,868	29,766
24	Bad Debt Expense	11,962	(206)	(10,657)
25	Depreciation and Amortization	181,931	155,965	115,358
26	Taxes Other Than Income	(1,780)	4,715	-
27	Property Taxes	19,302	35,789	34,096
28	Income Tax	125,431	108,680	99,767
29				
30	Total Operating Expenses	<u>\$ 1,424,405</u>	<u>\$ 1,234,217</u>	<u>\$ 955,296</u>
31	Operating Income	<u>\$ 153,620</u>	<u>\$ 211,923</u>	<u>\$ 331,078</u>
32	Other Income (Expense)			
33	Interest Income	\$ -	\$ 3,973	\$ 5,350
34	Other income	-	-	-
35	Interest Expense	(98,285)	(103,962)	(109,872)
36	Other Expense	-	-	-
37		-	-	-
38	Total Other Income (Expense)	<u>\$ (98,285)</u>	<u>\$ (99,989)</u>	<u>\$ (104,522)</u>
39	Net Profit (Loss)	<u><u>\$ 55,335</u></u>	<u><u>\$ 111,934</u></u>	<u><u>\$ 226,556</u></u>

SUPPORTING SCHEDULES:

RECAP SCHEDULES:
A-2

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Comparative Statements of Cash Flows

Exhibit
Schedule E-3
Page 1
Witness: Bourassa

Line No.		Test Year Ended <u>6/30/2008</u>	Prior Year Ended <u>6/30/2007</u>	Prior Year Ended <u>6/30/2006</u>
1				
2				
3	Cash Flows from Operating Activities			
4	Net Income	\$ 55,335	\$ 111,934	\$ 226,556
5	Adjustments to reconcile net income to net cash			
6	provided by operating activities:			
7	Depreciation and Amortization	181,931	115,358	115,358
8	Adjustments to Depreciation/Amortization	2,473	40,607	
9	Other			
10	Changes in Certain Assets and Liabilities:			
11	Accounts Receivable	5,346	(2,335)	14,052
12	Accounts Receivable, Other	29	(1,957)	(1,375)
13	Materials and Supplies Inventory			
14	Prepaid Expenses	(9,251)	1,369	(3,391)
15	Restricted Cash		361,365	(2,434)
16	Accounts Payable	9,953	(8,881)	(64,452)
17	Intercompany payable	653,251	(439,623)	421,220
18	Customer Deposits	(11,621)	32,832	13,096
19	Intercompany taxes receivable and taxes payable	(8,417)	623	(116,017)
20	Other assets and liabilities	209,869	(42,437)	(143,688)
21				
22	Net Cash Flow provided by Operating Activities	<u>\$ 1,088,898</u>	<u>\$ 168,855</u>	<u>\$ 458,925</u>
23	Cash Flow From Investing Activities:			
24	Capital Expenditures	(1,696,153)	(575,114)	(974,274)
25	Plant Held for Future Use			
26	Changes in debt reserve fund			
27	Net Cash Flows from Investing Activities	<u>\$ (1,696,153)</u>	<u>\$ (575,114)</u>	<u>\$ (974,274)</u>
28	Cash Flow From Financing Activities			
29	Change in Restricted Cash			
30	Change in net amounts due to parent and affiliates			
31	Receipt of advances for and contributions in aid of construction	32,150	(735,724)	170,817
32	Refunds for advances for construction			(56,002)
33	Repayments of Long-Term Debt	(63,539)	(57,858)	(69,680)
34	Dividends Paid			
35	Deferred Financing Costs			
36	Paid in Capital	645,003	1,110,499	442,480
37	Net Cash Flows Provided by Financing Activities	<u>\$ 613,614</u>	<u>\$ 316,917</u>	<u>\$ 487,615</u>
38	Increase(decrease) in Cash and Cash Equivalents	6,359	(89,342)	(27,734)
39	Cash and Cash Equivalents at Beginning of Year	27,437	116,779	144,513
40	Cash and Cash Equivalents at End of Year	<u>\$ 33,796</u>	<u>\$ 27,437</u>	<u>\$ 116,779</u>
41				
42				

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Statement of Changes in Stockholder's Equity

Exhibit
Schedule E-4
Page 1
Witness: Bourassa

Line
No.

	<u>Common</u> <u>Stock</u>	<u>Additional</u> <u>Paid-In-Capital</u>	<u>Retained</u> <u>Earnings</u>	<u>Total</u>
1				
2				
3				
4	Balance, June 30, 2005	\$ 1,000	\$ 1,301,007	\$ (120,844) \$ 1,181,163
5	Addnl Paid In Capital		-	442,480 442,480
6	Dividends			-
7	Net Income		226,556	226,556
8				
9	Balance, June 30, 2006	\$ 1,000	\$ 1,301,007	\$ 548,192 \$ 1,850,199
10	Addnl Paid In Capital		1,110,499	1,110,499
11	Dividends			-
12	Net Income		111,934	111,934
13				
14	Balance, June 30, 2007	\$ 1,000	\$ 1,301,007	\$ 1,770,625 \$ 3,072,632
15	Addnl Paid In Capital		645,003	645,003
16	Dividends			-
17	Net Income		55,335	55,335
18				
19	Balance, June 30, 2008	\$ 1,000	\$ 1,301,007	\$ 2,470,963 \$ 3,772,970

20
21
22
23
24
25
26

SUPPORTING SCHEDULES:

RECAP SCHEDULES:

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Detail of Plant in Service

Exhibit
Schedule E-5
Page 1
Witness: Bourassa

Line	Acct.		Plant	Plant	Plant
No.	No.	Plant Description	Balance	Additions, Reclass- ifications or Retirements	Balance
			at 12/31/2007		at 6/30/2008
1					
2	351	Organization	\$ -	\$ -	\$ -
3	352	Franchises	-	-	-
4	353	Land and Land Rights	461,300	-	461,300
5	354	Structures and Improvements	1,279,322	1,278,597	2,557,920
6	355	Power Generation Equipment	-	-	-
7	360	Collection Sewers - Force	694,034	12,258	706,292
8	361	Collection Sewers - Gravity	4,159,078	125,870	4,284,948
9	362	Special Collecting Structures	-	-	-
10	363	Services to Customers	186,983	11,739	198,723
11	364	Flow Measuring Devices	31,512	-	31,512
12	365	Flow Measuring Installations	179,348	274	179,622
13	370	Receiving Wells	698,278	(7,650)	690,628
14	371	Effluent Pumping Equipment	578,780	76,064	654,844
15	380	Treatment and Disposal Equipment	22,859	120,719	143,578
16	381	Plant Sewers	123,289	-	123,289
17	382	Outfall Sewer Lines	-	-	-
18	389	Other Plant and Misc. Equipment	863,216	76,216	939,432
19	390	Office Furniture and Equipment	224,587	-	224,587
20	391	Transportation Equipment	107,367	-	107,367
21	393	Tools, Shop and Garage Equipment.	3,493	2,262	5,754
22	394	Laboratory Equipment	7,488	-	7,488
23	395	Power Operated Equipment	-	-	-
24	396	Communication Equipment	-	40,451	40,451
25	398	Other TangiblePlant	-	-	-
26					
27					
28					
29					
30					
31					
32		TOTAL WATER PLANT	\$ 9,620,936	\$ 1,736,800	\$ 11,357,735
33					
34		<u>SUPPORTING SCHEDULES</u>		<u>RECAP SCHEDULES:</u>	
35				A-4	
36				E-1	
37					

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Operating Statistics

Exhibit
Schedule E-7
Page 1
Witness: Bouras

Line No.		Test Year Ended <u>6/30/2008</u>	Prior Year Ended <u>6/30/2007</u>	Prior Year Ended <u>6/30/2006</u>
1	<u>WASTEWATER STATISTICS:</u>			
2				
3				
4				
5	Sewer Revenues from Customer:	\$ 1,578,025	\$ 1,446,140	\$ 1,286,374
6				
7				
8				
9				
10	Year End Number of Customers	2,102	2,027	2,019
11				
12				
13				
14	Annual Revenue per Year End Customer	\$ 750.73	\$ 713.44	\$ 637.13
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Taxes Charged to Operations

Exhibit
Schedule E-8
Page 1
Witness: Bourassa

Line No.	Description	Test Year Ended <u>6/30/2008</u>	Prior Year Ended <u>6/30/2007</u>	Prior Year Ended <u>6/30/2006</u>
1				
2				
3	Federal Income Taxes*	\$ 57,575	\$ 93,303	\$ 77,022
4	State Income Taxes*	3,857	15,377	22,745
5	Payroll Taxes	-	-	-
6	Property Taxes	19,302	35,789	34,096
7				
8	Totals	<u>\$ 80,734</u>	<u>\$ 144,469</u>	<u>\$ 133,863</u>
9				
10				
11	*Computed			
12				
13				
14				

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Notes To Financial Statements

Exhibit
Schedule E-9
Page 1
Witness: Bourassa

The Company does not have outside auditors

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Projected Income Statements - Present & Proposed Rates

Exhibit
Schedule F-1
Page 1
Witness: Bourassa

Line No.		Test Year Actual Results	At Present Rates Year Ended 6/30/2009	At Proposed Rates Year Ended 6/30/2009
1	Revenues			
2	Flat Rate Revenues	\$ 1,555,192	\$ 1,557,337	\$ 2,471,099
3	Measured Revenues	15,917	15,917	15,917
4	Other Wastewater Revenues	6,916	6,916	6,916
5		<u>\$ 1,578,025</u>	<u>\$ 1,580,170</u>	<u>\$ 2,493,932</u>
6	Operating Expenses			
7	Salaries and Wages	\$ -	\$ -	\$ -
8	Purchased Wastewater Treatment	300,408	335,255	335,255
9	Sludge Removal Expense	706	706	706
10	Purchased Power	54,522	54,690	54,690
11	Fuel for Power Production	928	928	928
12	Chemicals	34,152	37,489	37,489
13	Materials and Supplies	11,224	11,224	11,224
14	Contractual Services - Professional	9,362	9,362	9,362
15	Contractual Services - Testing	16,955	16,955	16,955
16	Contractual Services - Other	1,863	1,863	1,863
17	Rents	19,830	19,830	19,830
18	Transportation Expenses	34,445	34,445	34,445
19	Insurance - General Liability	18,704	18,704	18,704
20	Regulatory Commission Expense	59,884	60,000	60,000
21	Miscellaneous Expense	20,845	20,845	20,845
		-	164,522	164,522
22	Depreciation	181,931	224,818	224,818
23	Taxes Other Than Income	(1,780)	(1,780)	(1,780)
24	Property Taxes	19,302	32,414	32,414
25	Income Tax	125,431	7,760	360,462
26				
27	Total Operating Expenses	<u>\$ 908,712</u>	<u>\$ 1,050,031</u>	<u>\$ 1,402,733</u>
28	Operating Income	<u>\$ 669,313</u>	<u>\$ 530,139</u>	<u>\$ 1,091,199</u>
29	Other Income (Expense)			
30	Interest Income	-	-	-
31	Other income	-	-	-
32	Interest Expense	(98,285)	(67,693)	(67,693)
33	Other Expense	-	-	-
34	Gain/Loss Sale of Fixed Assets	-	-	-
35	Total Other Income (Expense)	<u>\$ (98,285)</u>	<u>\$ (67,693)</u>	<u>\$ (67,693)</u>
36	Net Profit (Loss)	<u>\$ 571,028</u>	<u>\$ 462,446</u>	<u>\$ 1,023,506</u>
37				

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Projected Statements of Changes in Financial Position
Present and Proposed Rates

Exhibit
Schedule F-2
Page 1
Witness: Bourassa

Line No.		Test Year Ended 6/30/2008	At Present Rates Year Ended 6/30/2009	At Proposed Rates Year Ended 6/30/2009
1				
2				
3				
4				
5	Cash Flows from Operating Activities			
6	Net Income	\$ 55,335	\$ (152,178)	\$ 408,882
7	Adjustments to reconcile net income to net cash			
8	provided by operating activities:			
9	Depreciation and Amortization	181,931	224,818	224,818
10	Deferred Income Taxes	2,473		
11	Other	-		
12	Changes in Certain Assets and Liabilities:			
13	Accounts Receivable	5,346		
14	Unbilled Revenues	29		
15	Materials and Supplies Inventory	-		
16	Prepaid Expenses	(9,251)		
17	Deferred Charges	-		
18	Accounts Payable	9,953		
19	Intercompany payable	653,251	(500,000)	(500,000)
20	Customer Deposits	(11,621)		
21	Intercompany taxes receivable and taxes payable	(8,417)		
22	Other assets and liabilities	209,869		
23				
24	Net Cash Flow provided by Operating Activities	<u>\$ 1,088,898</u>	<u>\$ (427,360)</u>	<u>\$ 133,700</u>
25	Cash Flow From Investing Activities:			
26	Capital Expenditures	(1,696,153)	(232,450)	(232,450)
27	Plant Held for Future Use	-		
28	Changes in debt reserve fund	-		
29	Net Cash Flows from Investing Activities	<u>\$ (1,696,153)</u>	<u>\$ (232,450)</u>	<u>\$ (232,450)</u>
30	Cash Flow From Financing Activities			
31	Change in Restricted Cash	-	-	-
32	Change in net amounts due to parent and affiliates	-	-	-
33	Receipt of advances for and contributions in aid of construction	32,150	-	-
34	Refunds for advances for construction	-	-	-
35	Repayments of Long-Term Debt	(63,539)	(69,774)	(69,774)
36	Dividends Paid	-	-	-
37	Deferred Financing Costs	-	-	-
38	Paid in Capital	645,003	230,000	230,000
39	Net Cash Flows Provided by Financing Activities	<u>\$ 613,614</u>	<u>\$ 160,226</u>	<u>\$ 160,226</u>
40	Increase(decrease) in Cash and Cash Equivalents	6,359	(499,584)	61,476
41	Cash and Cash Equivalents at Beginning of Year	27,437	33,796	33,796
42	Cash and Cash Equivalents at End of Year	<u>\$ 33,796</u>	<u>\$ (465,788)</u>	<u>\$ 95,272</u>
43	F-3			
44				
45				

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Projected Construction Requirements

Exhibit
Schedule F-3
Page 1
Witness: Bourassa

Line

No.

1

2

Account

3

Number

Plant Asset:

2009

2010

2011

4

352

Franchises

\$

-

\$

-

\$

-

5

353

Land and Land Rights

6

354

Structures and Improvements

7

355

Power Generation Equipment

8

360

Collection Sewers - Force

9

361

Collection Sewers - Gravity

140,000

90,000

30,000

10

362

Special Collecting Structures

11

363

Services to Customers

12

364

Flow Measuring Devices

13

365

Flow Measuring Installations

14

370

Receiving Wells

30,000

220,000

20,000

15

371

Effluent Pumping Equipment

32,500

20,000

20,000

16

380

Treatment and Disposal Equipment

5,500

3,500

303,500

17

381

Plant Sewers

18

382

Outfall Sewer Lines

19

389

Other Plant and Misc. Equipment

20

390

Office Furniture and Equipment

375

500

500

21

391

Transportation Equipment

30,000

22

393

Tools, Shop and Garage Equipment.

4,075

2,000

2,000

23

394

Laboratory Equipment

24

395

Power Operated Equipment

25

398

Other Tangible Plant

20,000

50,000

180,000

26

27

28

29

30

Total

\$ 232,450 \$ 416,000 \$ 556,000

31

32

33

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Assumptions Used in Rate Filing

Exhibit
Schedule F-4
Page 1
Witness: Bourassa

Line

No.

- 1 Property Taxes were computed using the method used by the Arizona Department
- 2 of Revenue
- 3
- 4 Projected construction expenditures are shown on Schedule A-4.
- 5
- 6 Expense adjustments are shown on Schedule C2, and are explained in the testimony.
- 7
- 8 Accumulated depreciation was computed using depreciation rates authorized
- 9 in prior Commission decision.
- 10
- 11 Income taxes were computed using statutory state and federal income tax rates.
- 12
- 13
- 14
- 15

Black Mountain Sewer Corporation

Revenue Summary

With Annualized Revenues to Year End Number of Customers
Test Year Ended June 30, 2008

Exhibit
Schedule H-1
Witness: Bourassa

Line No.	Customer Classification	Present Revenues	Proposed Revenues	Dollar Change	Percent Change	Percent of Present Sewer Revenues	Percent of Proposed Sewer Revenues
1	Residential	1,077,880	1,678,696	600,816	55.74%	68.59%	67.59%
2	Commercial (Standard Rate)	378,678	589,788	211,110	55.75%	24.10%	23.75%
3	Commercial (Special Rate)						
4	Boulders Resort	50,085	100,356	50,272	100.37%	3.19%	4.04%
5	Desert Forest	13,729	23,939	10,210	74.37%	0.87%	0.96%
6	El Pedregal	26,587	53,990	27,403	103.07%	1.69%	2.17%
7	Boulders Club	168	342	174	103.07%	0.01%	0.01%
8	Spanish Village	8,395	17,048	8,653	103.07%	0.53%	0.69%
9	Effluent Sales	15,917	19,578	3,661	23.00%	1.01%	0.79%
10	Subtotal	1,571,439	2,483,738	912,299	58.06%	100.00%	100.00%
11							
12	Revenue Annualization						
13	Residential	2,145	3,341	1,196	55.74%	0.14%	0.13%
14							
15	Misc Service Revenues						
16	Misc Revenues	6,915	6,915	-	0.00%	0.44%	0.28%
17	Reconciling Amount to C-1	(329)	(62)	267	-81.16%	-0.02%	0.00%
18	Totals	1,580,170	2,493,931	913,762	57.83%	99.98%	100.00%
19							
20							
21							
22							
23							
24							
25							

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Analysis of Revenue by Detailed Class
Special Rate Commercial Customers Pay Standard Commerical Rate

Schedule H-2
Page 1
Witness: Bourassa

Line No.	Customer Classification	Average Number of Customers	Average Effluent	Average Bill		Proposed Increase	
		at 6/30/2008		Present Rates	Proposed Rates	Dollar Amount	Percent Amount
1	Residential	1,972	N/A	\$ 45.64	\$ 71.08	\$ 25.44	55.741%
2	Commercial (Standard Rate)	124	N/A	103.41	161.06	57.65	55.749%
3	Commercial (Special Rate)						
4	B-H Enterprises (West)	-	N/A	\$ -	N/A		
5	B-H Enterprises (East)	1	N/A	-	N/A		
6	Barb's Per Grooming	-	N/A	-	N/A		
7	Boulders Resort	1	N/A	4,173.74	8,363.03	4,189.29	100.373%
8	Carefree Dental	-	N/A	-	N/A		
9	Ridgecrest Realty	1	N/A	-	N/A		
10	Desert Forest	1	N/A	1,144.08	1,994.93	850.85	74.370%
11	Desert Hills Pharmacy	1	N/A	-	N/A		
12	El Pedregal	1	N/A	2,215.55	4,499.14	2,283.59	103.071%
13	Lemon Tree	1	N/A	-	N/A		
14	Body Shop	1	N/A	-	N/A		
15	Spanish Village	-	N/A	-	0.28499		
16	Boulders Club	-	N/A	168.41	341.99	173.58	103.071%
17	Anthony Vuitaggio	1	N/A	-	N/A		
18							
19	Effluent	1	3,542,780	\$ 1,326.42	\$ 1,631.49	305.08	23.000%
20							
21	Total	<u>2,106</u>					
22							
23							
24							
25							

Black Mountain Sewer Corporation
Present and Proposed Rates
Test Year Ended June 30, 2008

Exhibit
Schedule H-3
Page 1
Witness: Bourassa

Line No.		Present Rates	Present Rates	Proposed Rates	Proposed Rates	Percent Change
1						
2	<u>Customer Classification</u>					
3						
4	Monthly Charge for:					
5	Residential		\$ 45.64		\$ 71.08	55.74%
6	Commercial (Standard Rate), per gallon per day[1]		0.18298		0.28499	55.75%
7		per acre foot		per acre foot		
8	Effluent Sales (per 1,000 gallons)	\$ 122.00	0.37440	\$ 150.00	0.46051	23.00%
9						
10	Commercial (Special Rate), per gallon per day[1]					
11		Gallons	Monthly	Rate per	Monthly	Rate per
12	<u>Customer[2]</u>	<u>Per Day[1]</u>	<u>Billing</u>	<u>Gallon</u>	<u>Billing</u>	<u>Gallon [2]</u>
13	B-H Enterprises	2,525	\$ 354.36	0.14034	N/A	N/A
14	B-H Enterprises	1,400	\$ 196.48	0.14034	N/A	N/A
15	Barb's Per Grooming	250	\$ 35.09	0.14034	N/A	N/A
16	Boulders Resort	29,345	\$ 4,173.74	0.14223	\$ 8,363.03	0.28499
17	Carefree Dental	1,625	\$ 228.05	0.14034	N/A	N/A
18	Ridgecrest Realty	450	\$ 63.87	0.14193	N/A	N/A
19	Desert Forest	7,000	\$ 1,144.08	0.16344	\$ 1,994.93	0.28499
20	Desert Hills Pharmacy	800	\$ 136.49	0.17061	N/A	N/A
21	El Pedregal	15,787	\$ 2,215.55	0.14034	\$ 4,499.14	0.28499
22	Lemon Tree	300	\$ 41.07	0.13691	N/A	N/A
23	Body Shop	1,000	\$ 176.47	0.17647	N/A	N/A
24	Spanish Village	4,985	\$ 699.59	0.14034	\$ 1,420.68	0.28499
25	Boulders Club	1,200	\$ 168.41	0.14034	\$ 341.99	0.28499
26	Anthony Vuitaggio	300	\$ 46.79	0.15597	N/A	N/A
27						
28						
29	[1] Commercial wastewater flows are based on the average daily flows set forth in Engineering Bulletin 12, Table 1					
30	published by the Arizona Department of Environmental Quality					
31	[2] Company is proposing to set the special rate commercial customers at the same rate as the standard commercial rate					
32	customers.					

Black Mountain Sewer Corporation
Present and Proposed Rates
Test Year Ended June 30, 2008

Exhibit
Schedule H-3
Page 2
Witness: Bourassa

Line No.	Other Service Charges	Present Rates	Proposed Rates
1	Establishment	\$ 25.00	\$ 25.00
2	Re-Establishment	\$ 25.00	\$ 25.00
3	Reconnection	no charge	no charge
4	After hours service	\$ 25.00	\$ 25.00
5	Min Deposit Requirement (Residential)	(a)	(a)
6	Min Deposit Requirement (Non-Residential)	(a)	(a)
7	NSF Check	10.00	10.00
8	Deferred Payment finance charge, Per Month	1.50%	1.50%
9	Late Payment Charge, Per Month	1.50%	1.50%
10	Main Extension Tariff (b)	Cost	Cost
11	Purchased Wastewater Surcharge	NT	[3]
12	Hook-Up Fee for New Service Connections (per Gallon per Day)[4]	NT	\$ 8.00
13			
14	(a) Per A.C.C. R14-2-603B <u>Residential</u> - two times the average bill. <u>Non-residential</u> - two and one-half times the average bill.		
15	(b) Per A.C.C. R14-2-406(B)		
16			
17			
18	[3] For increases in wastewater treatment costs from City of Scottsdale. See Testimony of Thomas J. Bourassa.		
19			
20	[4] Commercial wastewater flows are based on the average daily flows set forth in Engineering Bulletin 12, Table 1		
21	published by the Arizona Department of Environmental Quality. For wastewater treatment capacity constructed or		
22	purchased. See tariff for details.		
23			
24	IN ADDITION TO THE COLLECTION OF REGULAR RATES, THE UTILITY WILL COLLECT FROM		
25	ITS CUSTOMERS A PROPORTIONATE SHARE OF ANY PRIVILEGE, SALES, USE, AND FRANCHISE		
26	TAX. PER COMMISSION RULE (14-2-409.D 5).		
27	ALL ADVANCES AND/OR CONTRIBUTIONS ARE TO INCLUDE LABOR, MATERIALS, OVERHEADS,		
28	AND ALL APPLICABLE TAXES, INCLUDING ALL GROSS-UP TAXES FOR INCOME TAXES.		
29	COST TO INCLUDE LABOR, MATERIALS AND PARTS, OVERHEADS AND ALL APPLICABLE TAXES.		
30			
31			
32			
33			

Black Mountain Sewer Corporation
 Bill Comparison
 Customer Classification
 Residential

Exhibit
 Schedule H4
 Page 1
 Witness: Bourassa

Present Bill	Proposed Bill	Dollar Increase	Percent Increase
\$ 45.64	\$ 71.08	\$ 25.44	55.74%

Present Rates:
 Monthly Charge: \$ 45.64

Proposed Rates:
 Monthly Charge: \$ 71.08

Black Mountain Sewer Corporation
 Bill Comparison
 Customer Classification
 Commercial

Exhibit
 Schedule H4
 Page 2
 Witness: Bourassa

Flow GPD	Present Bill	Proposed Bill	Dollar Increase	Percent Increase
-	\$ -	\$ -	\$ -	0.00%
60	10.98	17.10	6.12	55.75%
110	20.13	31.35	11.22	55.75%
160	29.28	45.60	16.32	55.75%
210	38.43	59.85	21.42	55.75%
260	47.57	74.10	26.52	55.75%
310	56.72	88.35	31.62	55.75%
360	65.87	102.60	36.72	55.75%
410	75.02	116.85	41.82	55.75%
1,000	182.98	284.99	102.01	55.75%
2,000	365.96	569.98	204.02	55.75%
3,000	548.94	854.97	306.03	55.75%
4,000	731.92	1,139.96	408.04	55.75%
5,000	914.90	1,424.95	510.05	55.75%
10,000	1,829.80	2,849.90	1,020.10	55.75%
20,000	3,659.60	5,699.80	2,040.20	55.75%
30,000	5,489.40	8,549.70	3,060.30	55.75%
40,000	7,319.20	11,399.60	4,080.40	55.75%
50,000	9,149.00	14,249.50	5,100.50	55.75%

Present Rates:
 Charge Per Gallon \$0.182980

Proposed Rates:
 Charge Per Gallon \$0.284990

Average Flow	103.41	161.06	\$ 57.65	55.75%
Median Flow	19.21	29.92	\$ 10.71	55.75%

Black Mountain Sewer Corporation
 Bill Comparison
 Customer Classification
 Special Tariff - Boulders Resort

Exhibit
 Schedule H4
 Page 3
 Witness: Bourassa

Present	Proposed	Dollar	Percent
Bill	Bill	Increase	Increase
\$ 4,173.74	\$ 8,363.03	\$ 4,189.29	100.37%

Present Rates:
 Monthly Charge: \$4,173.74

Proposed Rates:
 Monthly Charge: \$8,363.03

Black Mountain Sewer Corporation
 Bill Comparison
 Customer Classification
 Special Tariff - Desert Forest

Exhibit
 Schedule H4
 Page 4
 Witness: Bourassa

Present	Proposed	Dollar	Percent
<u>Bill</u>	<u>Bill</u>	<u>Increase</u>	<u>Increase</u>
\$ 1,144.08	\$ 1,994.93	\$ 850.85	74.37%

Present Rates:
 Monthly Charge: \$ 1,144.08

Proposed Rates:
 Monthly Charge: \$ 1,994.93

Black Mountain Sewer Corporation
 Bill Comparison
 Customer Classification
 Special Tariff - El Pedregal

Exhibit
 Schedule H4
 Page 5
 Witness: Bourassa

Present	Proposed	Dollar	Percent
<u>Bill</u>	<u>Bill</u>	<u>Increase</u>	<u>Increase</u>
\$ 2,215.55	\$ 4,499.14	\$ 2,283.59	103.07%

Present Rates:
 Monthly Charge: \$2,215.55

Proposed Rates:
 Monthly Charge: \$4,499.14

Black Mountain Sewer Corporation
 Bill Comparison
 Customer Classification
 Special Tariff - Boulders Club

Exhibit
 Schedule H4
 Page 6
 Witness: Bourassa

Present	Proposed	Dollar	Percent
<u>Bill</u>	<u>Bill</u>	<u>Increase</u>	<u>Increase</u>
\$ 168.41	\$ 341.99	\$ 173.58	103.07%

Present Rates:
 Monthly Charge: \$ 168.41

Proposed Rates:
 Monthly Charge: \$ 341.99

Black Mountain Sewer Corporation
 Bill Comparison
 Customer Classification
 Special Tariff - Spanish Village

Exhibit
 Schedule H4
 Page 7
 Witness: Bourassa

Present	Proposed	Dollar	Percent
<u>Bill</u>	<u>Bill</u>	<u>Increase</u>	<u>Increase</u>
\$ 699.59	\$ 1,420.68	\$ 721.08	103.07%

Present Rates:
 Monthly Charge: \$ 699.59

Proposed Rates:
 Monthly Charge: \$ 1,420.68

Black Mountain Sewer Corporation
 Bill Comparison
 Customer Classification
 Effluent Sales

Exhibit
 Schedule H4
 Page 8
 Witness: Bourassa

MidPoint Usage	Present Bill	Proposed Bill	Dollar Increase	Percent Increase
1,000	0.37	0.46	0	23.00%
2,000	0.75	0.92	0	23.00%
3,000	1.12	1.38	0	23.00%
4,000	1.50	1.84	0	23.00%
5,000	1.87	2.30	0	23.00%
6,000	2.25	2.76	1	23.00%
7,000	2.62	3.22	1	23.00%
8,000	3.00	3.68	1	23.00%
9,000	3.37	4.14	1	23.00%
10,000	3.74	4.61	1	23.00%
12,000	4.49	5.53	1	23.00%
14,000	5.24	6.45	1	23.00%
16,000	5.99	7.37	1	23.00%
18,000	6.74	8.29	2	23.00%
20,000	7.49	9.21	2	23.00%
25,000	9.36	11.51	2	23.00%
30,000	11.23	13.82	3	23.00%
35,000	13.10	16.12	3	23.00%
40,000	14.98	18.42	3	23.00%
45,000	16.85	20.72	4	23.00%
50,000	18.72	23.03	4	23.00%
60,000	22.46	27.63	5	23.00%
70,000	26.21	32.24	6	23.00%
80,000	29.95	36.84	7	23.00%
90,000	33.70	41.45	8	23.00%
100,000	37.44	46.05	9	23.00%

Present Rates:
 Minimum \$ -
 Gallons in Min. -
 Charge Per 1,000 Gallons \$ 0.37440

Proposed Rates:
 Minimum \$ -
 Gallons in Min. -
 Charge Per 1,000 Gallons \$ 0.46051

Average Usage				
3,542,780	\$	1,326.42	\$	1,631.49
			\$	305.08
Median Usage				
3,542,780	\$	1,326.42	\$	1,631.49
			\$	305.08
				23.00%

Residential

Exhibit
Schedule H5
Page 1
Witness: Bourassa

[illegible]

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Customer Classification
Commercial

Exhibit
Schedule H5
Page 2
Witness: Bourassa

Usage From:	Flow GPD	Month Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Total Year
50	50	10	10	10	10	10	11	10	10	10	10	10	10	121
60	60	2	2	2	2	2	2	2	2	2	2	2	2	24
66	66	2	2	2	2	2	2	2	2	2	2	2	2	24
75	75	2	2	2	2	3	2	2	2	2	2	2	2	25
100	100	6	6	6	6	6	6	5	6	6	7	5	5	70
105	105	5	5	5	5	5	6	6	5	5	5	5	5	62
125	125	2	2	2	2	2	2	2	2	2	2	3	2	25
140	140	2	2	2	2	2	2	2	2	2	2	2	2	24
150	150	6	6	6	6	6	6	6	6	6	6	6	6	72
166	170	2	2	2	2	2	2	2	2	2	2	2	2	24
200	200	10	10	10	10	10	10	10	10	10	10	10	10	120
250	250	6	6	6	6	6	6	6	6	6	6	6	6	72
256	275	2	2	2	2	2	2	2	2	2	2	2	2	24
307	310	3	3	3	3	4	4	4	4	4	4	4	4	44
350	350	1	1	1	1	1	1	1	1	1	1	1	1	12
400	400	2	2	2	2	2	2	2	2	2	2	2	2	24
450	450	1	1	1	1	1	1	1	1	1	1	1	1	12
479	480	3	3	3	3	3	3	3	4	4	4	4	4	41
500	500	7	7	7	7	7	7	7	5	5	5	5	5	74
506	506	1	1	1	1	1	1	1	1	1	1	1	1	12
533	533	-	-	-	-	-	-	-	1	1	1	1	1	5
600	600	3	3	3	3	3	3	3	3	3	3	3	3	36
660	660	-	-	-	-	-	1	1	1	1	1	1	1	7
675	675	1	1	1	1	1	1	1	1	1	1	1	1	12
700	700	1	1	1	1	1	1	2	1	1	1	1	1	13
750	750	2	2	2	2	2	2	2	2	2	2	2	2	24
800	800	2	2	2	2	2	2	2	2	2	2	2	2	24
842	845	1	1	1	1	1	1	1	1	1	1	1	1	12
900	900	3	3	3	3	3	3	3	2	2	2	2	2	31
955	955	1	1	1	1	1	1	1	-	1	1	1	1	11
1,000	1,000	1	1	1	1	1	1	1	1	1	1	1	1	12
1,074	1,074	1	1	1	1	1	1	1	1	1	1	1	1	12
1,140	1,140	2	2	2	2	2	2	2	2	2	2	2	2	24
1,158	1,158	-	-	-	-	-	1	1	1	1	1	1	1	7

Black Mountain Sewer Corporation
 Test Year Ended June 30, 2008
 Customer Classification
 Commercial

Exhibit
 Schedule H5
 Page 2
 Witness: Bourassa

Usage From:	Flow GPD	Month Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Total Year
1,347	1	1	1	1	1	1	1	1	1	1	1	1	1	12
1,423	1	1	1	1	1	1	1	1	1	1	1	1	1	12
1,425	1	1	1	1	1	1	1	1	1	1	1	1	1	12
1,500	2	2	2	2	2	2	2	2	2	2	2	2	2	24
1,527	3	3	3	3	3	3	3	3	3	3	3	3	3	36
1,560	2	2	2	2	2	2	2	2	2	2	2	2	2	24
1,620	1	1	1	1	1	1	1	1	1	1	1	1	1	12
1,750	1	1	1	1	1	1	1	1	1	1	1	1	1	12
1,800	1	1	1	1	1	1	1	1	1	1	1	1	1	12
1,830	1	1	1	1	1	1	1	1	1	1	1	1	1	12
1,850	1	1	1	1	1	1	1	1	1	1	1	1	1	12
2,000	3	3	3	3	3	3	3	3	3	3	3	3	3	36
2,025	1	1	1	1	1	1	1	1	1	1	1	1	1	12
2,288	1	1	1	1	1	1	1	1	1	1	1	1	1	12
2,600	1	1	1	1	1	1	1	1	1	1	1	1	1	12
3,000	1	1	1	1	1	1	1	1	1	1	1	1	1	12
3,011	-	-	-	-	-	1	-	-	-	-	-	-	-	1
4,000	1	1	1	1	1	1	1	1	1	1	1	1	1	12
4,500	1	1	1	1	1	1	1	1	1	1	1	1	1	12
5,000	1	1	1	1	1	1	1	1	1	1	1	1	1	12
6,950	1	1	1	1	1	1	1	1	1	1	1	1	1	12
7,530	1	1	1	1	1	1	1	1	1	1	1	1	1	12
8,851	1	1	1	1	1	1	1	1	1	1	1	1	1	12
11,589	-	-	-	-	-	-	-	-	-	-	-	-	-	1
17,025	2	1	1	1	1	1	1	1	1	1	1	1	1	13
44,490	1	1	1	1	1	1	1	1	1	1	1	1	1	12
Totals		124	123	123	123	126	129	127	124	125	126	125	124	1,499

Average Flow 565
 Median Flow 105
 Average # Customers 125

Special Tariff - Boulders Resort

Exhibit
Schedule H5
Page 3
Witness: Bourassa

[illegible]

Special Tariff - Desert Forest

Witness: Bourassa

[illegible]

Special Tariff - El Pedregal

Exhibit
Schedule H5
Page 5
Witness: Bourassa

[illegible]

Special Tariff - Boulders Club

Exhibit
Schedule H5
Page 6
Witness: Bourassa

[illegible]

Special Tariff - Spanish Village

Exhibit
Schedule H5
Page 7
Witness: Bou

[illegible]

Effluent Sales

Exhibit
Schedule H5
Page 8
Witness: Bourassa

[illegible]

1 FENNEMORE CRAIG, P.C.
Jay L. Shapiro (No. 014650)
2 Norman D. James (No. 006901)
3003 N. Central Ave.
3 Suite 2600
Phoenix, Arizona 85012
4 Attorneys for Black Mountain Sewer Corporation

5
6 **BEFORE THE ARIZONA CORPORATION COMMISSION**

7
8 IN THE MATTER OF THE
APPLICATION OF BLACK MOUNTAIN
SEWER CORPORATION, AN ARIZONA
9 CORPORATION, FOR A
DETERMINATION OF THE FAIR
10 VALUE OF ITS UTILITY PLANT AND
PROPERTY AND FOR INCREASES IN
11 ITS RATES AND CHARGES FOR
UTILITY SERVICE BASED THEREON.

DOCKET NO: SW-02361A-08-_____

12
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15
16 **DIRECT TESTIMONY OF**
17 **THOMAS J. BOURASSA**
18 **(COST OF CAPITAL)**

19 **December 19, 2008**
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2138075.4

1 **I. INTRODUCTION.**

2 **Q. PLEASE STATE YOUR NAME AND ADDRESS.**

3 A. My name is Thomas J. Bourassa. My business address is 139 W. Wood Drive,
4 Phoenix, Arizona 85029.

5 **Q. ARE YOU THE SAME THOMAS J. BOURASSA THAT FILED DIRECT**
6 **TESTIMONY ON RATE BASE, INCOME STATEMENT, REVENUE**
7 **REQUIREMENT AND RATE DESIGN IN THIS DOCKET?**

8 A. Yes, and all of my background information and testimony regarding my
9 qualifications is contained in that portion of my direct testimony.

10 **II. SUMMARY OF TESTIMONY AND THE PROPOSED COST OF CAPITAL**
11 **FOR THE COMPANY.**

12 **Q. WHAT IS THE PURPOSE OF THIS PORTION OF YOUR DIRECT**
13 **TESTIMONY?**

14 A. This portion of my direct testimony will focus on cost of capital issues. I will
15 testify in support of the Black Mountain Sewer Corporation's ("BMSC" or "the
16 Company") proposed rate of return on its fair value rate base. I am sponsoring the
17 Company's D Schedules, which are attached to this testimony. Also attached to
18 this testimony are Exhibits 1 through 7, which are discussed below. As noted
19 above, I am also sponsoring direct testimony that addresses the Company's rate
20 base, income statement (revenue and operating expenses), required increase in
21 revenue, and its rate design and proposed rates and charges for service. For the
22 convenience of the Commission and the parties, that testimony and my related
23 schedules are being filed separately in this case.

24 **Q. PLEASE SUMMARIZE YOUR COST OF CAPITAL TESTIMONY.**

25 A. There are two basic components: capital structure and return on rate base. I will
26 address capital structure first. The Company's test year capital structure consisted

1 of approximately 19.3 percent debt and 80.7 percent common equity. At the end of
2 the test year, June 30, 2008, BMSC had adjusted total capital of \$5,225,205,
3 consisting of \$1,010,649 long-term debt and \$4,214,556 common equity.
4 However, because the debt service for the Company's long-term debt (used for the
5 purchase of Scottsdale wastewater treatment capacity) was treated by the
6 Commission as an operating "lease" expense to keep rates down, the long-term
7 debt is excluded from the capital structure for ratemaking purposes, leaving a
8 100% equity capital structure for ratemaking purposes.

9 **Q. IS THERE A RELATIONSHIP BETWEEN A UTILITY'S CAPITAL**
10 **STRUCTURE AND ITS COST OF CAPITAL?**

11 A. Yes, both in the real business world and for ratemaking purposes. The latter
12 relationship has been a significant issue in recent rate cases, but I will address the
13 real world first.

14 Generally, when a firm engages in debt financing, it exposes itself to greater
15 risk. Once debt becomes significant relative to the total capital structure, the risk
16 increases in a geometric fashion compared to the linear percentage increase in the
17 debt ratio itself. This risk is illustrated by considering the effect of leverage on net
18 earnings. For example, as leverage increases, the equity ratio falls. This creates
19 two adverse effects on the investor. First, equity earnings decline rapidly and may
20 even disappear. Second, the "cushion" of equity protection for debt falls. A
21 decline in the protection afforded debt holders, or the possibility of a serious
22 decline in debt protection, will act to increase the cost of debt financing.
23 Therefore, one may conclude that each new financing, whether through debt or
24 equity, impacts the marginal cost of future financing by any alternative method.
25 For a firm already perceived as being over-leveraged, this additional borrowing
26 would cause the marginal cost of both equity and debt to increase. On the other

1 hand, if the same firm instead employed equity funding, this could actually reduce
2 the real marginal cost of additional borrowing, even if the particular equity
3 issuance occurred at a higher unit cost than an equivalent amount of debt.

4 **Q. DOES THE COMPANY HAVE AN APPROPRIATE CAPITAL**
5 **STRUCTURE GIVEN ITS SIZE AND OTHER CHARACTERISTICS?**

6 A. Appropriate yes. Ideal, no. More debt would be preferable, but relatively small
7 utilities like BMSC cannot support the same percentage of debt in their capital
8 structure as a large publicly traded utility. A theoretically "balanced" capital
9 structure is one that provides debt with adequate protection, yet contains enough
10 leverage to produce equity earnings sufficient to attract new equity capital (but not
11 so large a degree of leverage as to introduce earnings instability and render equity
12 investment speculative). For small utilities, financial leverage can be hard to
13 obtain, costly and often has detrimental impacts.

14 **Q. BUT ISN'T BMSC OWNED BY A LARGE INCOME FUND WITH MULTI-**
15 **NATIONAL HOLDINGS AND ACCESS TO CAPITAL?**

16 A. Yes, but so what? The issue is the investment, BMSC, not the investor, Algonquin.
17 If Algonquin is forced to loan money to or secure financing for its subsidiaries on
18 terms favorable to the utility, this is no different than forcing Algonquin to invest
19 capital at some discounted rate of return. BMSC's access to and cost of debt
20 should be based on BMSC, not its parent.

21 **Q. ARE YOU TESTIFYING THAT BMSC DOES NOT HAVE ANY ACCESS**
22 **TO DEBT FINANCING?**

23 A. No, not specifically. In fact, in light of recent rate decisions, BMSC should be
24 looking to fund any future projects with some debt to move towards a more
25 balanced capital structure. But the Commission will have to recognize the true
26 costs of that debt for ratemaking if it is reasonable given BMSC's situation.

1 **Q. WHAT IS THE RELATIONSHIP BETWEEN CAPITAL STRUCTURE**
2 **AND RATE MAKING?**

3 A. The capital structure is used to weight the debt and equity returns to derive a cost
4 of capital. In the case of BMSC, the Commission determined that the Company's
5 debt would not be used for this ratemaking purpose. Instead, the Commission
6 directed that the debt incurred to acquire treatment capacity should be treated as a
7 lease and run through the income statement. *See* Decision No. 59944 at 6;
8 Decision No. 69146 at 8-9. This results in a weighted average cost of capital of
9 100% equity for ratemaking purposes and BMSC still facing the financial risk of a
10 capital structure with the 20% debt.

11 **Q. WHY DID THE COMMISSION TREAT DEBT SUPPORTING RATE BASE**
12 **AS AN EXPENSE?**

13 A. It was a fiction recommended by Staff and adopted by the Commission that
14 resulted in lower rates to customers at that time. *See* Rebuttal Testimony of
15 Thomas J. Bourassa in Docket SW-02361A-05-0657 at 26.

16 **Q. THANK YOU, LET'S CONTINUE WITH THE SUMMARY OF YOUR**
17 **COST OF CAPITAL TESTIMONY. WHAT IS YOUR RECOMMENDED**
18 **RETURN ON RATE BASE?**

19 A. I am recommending a return on equity ("ROE") of 12.8 percent. My
20 recommendation is based on (i) cost of equity estimates using constant growth and
21 multi-stage growth discounted cash flow ("DCF") models and the capital asset
22 pricing model ("CAPM") for the sample group of publicly traded utilities, (ii) my
23 review of the economic conditions expected to prevail during the period in which
24 new rates will be in effect, (iii) my judgments about the risks associated with small
25 utilities like BMSC not captured by the market data, and (iv) the financial risk
26 associated with the debt in BMSC's capital structure. The weighted cost of capital

1 is 12.8 percent, as shown on Schedule D-1. The weighted cost of capital is applied
2 to the Company's fair value rate base to compute the Company's required
3 operating income.

4 **Q. PLEASE SUMMARIZE THE APPROACH YOU USED TO ESTIMATE**
5 **THE COST OF EQUITY FOR THE COMPANY.**

6 A. The cost of equity for BMSC cannot be estimated directly because BMSC's
7 common stock is not publicly traded and there is no market data for BMSC.
8 Consequently, I applied the DCF and CAPM models using data from a sample of
9 water utilities selected from the Value Line Investment Survey. There are six
10 water utilities in my sample: American States Water, Aqua America, California
11 Water, Connecticut Water, Middlesex Water, and SJW Corp. I selected these
12 particular utilities because the Commission's Utilities Division ("Staff") has relied
13 on data for these water utilities in a number of recent water and sewer utility rate
14 cases. Computations of common equity returns using DCF and CAPM approaches
15 are shown on Schedules D-4.9 through D-4.10 and Schedule D-4.13.

16 Using Staff's typical sample group, the DCF analyses indicate that a ROE in
17 the range of 9.9 percent to 13.5 percent is appropriate. The CAPM analysis, again
18 using the same sample group, indicates that a ROE in the range of 9.9 percent to
19 19.4 percent is appropriate.

20 An ROE of 12.8 percent is higher than that of the range of the averages of
21 the results produced by both types of equity cost estimates. Of course, neither of
22 the models accounts for the Company's high risk for which there is no truly
23 comparable market data. As a result my final recommendation is largely impacted
24 by the result of my judgment about the high degree of financial and other risk
25 associated with BMSC and other small Arizona water and sewer providers. The
26 higher return recommendation for BMSC also takes into consideration BMSC's

1 small size relative to the six water utilities in Staff's sample group and other
2 business risks not captured by the market data including the higher business risk as
3 the result of Arizona regulation.

4 **Q. WHY DO YOU BELIEVE THAT THE COMPANY HAS HIGH RISK?**

5 A. Arizona is a hard place for small water and sewer providers to conduct business
6 due to the regulatory climate. Shipman, T.A. (2008, November 7). Assessing U.S.
7 Utility Regulatory Environments. *Standard & Poor's RatingsDigest*. Attached
8 hereto as Exhibit 7. Unfortunately, this problem is now getting national attention.
9 I can try to illustrate with two recent examples of regulation impacting a utility's
10 opportunity to earn a return on rate base.

11 In Chaparral City's pending rate case (Docket No. W-02113A-07-0551), the
12 evidence shows that this utility earned a return hundreds of basis points below its
13 authorized return the first year its current rates were in effect, and less every year
14 since. Meanwhile, its rate case, filed two years ago based on a 2006 test year,
15 finally held Phase One hearings in December 2008. I have every reason to believe
16 that by the time rates go into effect sometime in Spring 2009, Chaparral City will
17 again be earning significantly less than its authorized rate of return.

18 The Company's affiliate, Gold Canyon Sewer Company, recently had its
19 lawfully adopted revenue requirement chopped by several hundred thousand
20 dollars. This was accomplished through use of fictitious ratemaking, and the
21 disallowance of plant built consistent with all regulatory requirements and found
22 "prudent" under the Commission's own regulation. This was admittedly done to
23 reduce the magnitude of rate increases.

24 It is hard to envision a more risky financial environment than that presented
25 by these two examples. Rates are delayed by the time the process takes, interim
26 rates are strongly discouraged, and prudently built plant is disallowed, all in the

1 name of lower rates. These utilities are not being given an opportunity to earn their
2 return on rate base. No disrespect, but I wouldn't make a loan to an Arizona water
3 or sewer company, and if had to I make an equity investment, I would expect
4 returns in the 15%-20% range given the risk.

5 **III. OVERVIEW OF THE RELATIONSHIP BETWEEN RISK AND THE**
6 **EXPECTED RETURN ON AN INVESTMENT.**

7 **Q. HOW IS THE COST OF EQUITY TYPICALLY ANALYZED?**

8 A. The cost of equity is the rate of return that equity investors expect to receive on
9 their investment. Investors can choose to invest in many types of assets, not simply
10 publicly traded stock. Each investment will have varying degrees of risk, ranging
11 from relatively low risk assets such as Treasury securities to somewhat higher risk
12 corporate bonds to even higher risk common stocks. As the level of risk increases,
13 investors require higher returns on their investment. Finance models that are used
14 to estimate the cost of equity often rely on this basic concept.

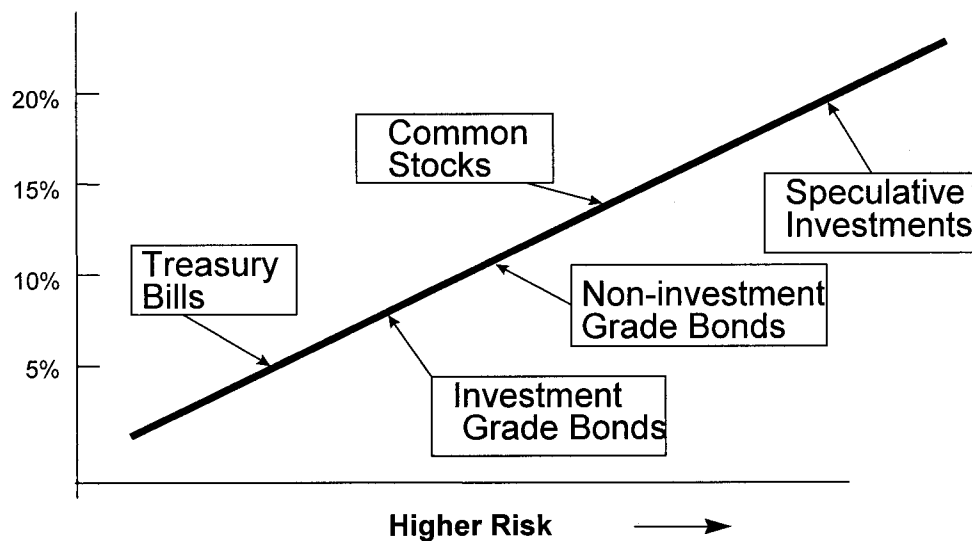
15 **Q. CAN YOU ILLUSTRATE THE CAPITAL MARKET RISK-RETURN**
16 **CONCEPT?**

17 A. Yes. The following graph depicts the risk-return relationship that has become
18 widely known as the Capital Market Line ("CML"). The CML illustrates in a
19 general way the risk-return relationship.

20 ...
21 ...
22 ...
23 ...
24 ...
25 ...
26 ...

The Capital Market Line (CML)

Expected Rate of Return



The CML can be viewed as a continuum of the available investment opportunities for investors. Investment risk increases moving upward and to the right along the CML. Again, the expected return increases with the risk.

Q. HOW DOES THE RISK-RETURN TRADE-OFF CONCEPT WORK IN THE CAPITAL MARKET?

A. As already suggested by the CML, the allocation of capital in a free market economy is based upon the relative risk of, and expected return from, an investment. In general, investors rank investment opportunities in the order of their relative risks. Investment alternatives in which the expected return is commensurate with the perceived risk become viable investment options. If all other factors remain equal, the greater the risk, the higher the rate of return

1 investors will require to compensate investors for the possibility of loss of either
2 the principal amount invested or the expected annual income from such investment.

3 Short-term Treasury bills provide a high degree of certainty and in nominal
4 terms (after considering inflation) are considered virtually risk free. Long-term
5 bonds and preferred stocks, having priority claims to assets and fixed income
6 payments, are relatively low risk, but are not risk free. The market values of long-
7 term bonds often fluctuate when government policies or other factors cause interest
8 rates to change. Common stocks are higher and to the right on the CML continuum
9 because they are exposed to more risk. Common stock risk includes the nature of
10 the underlying business and financial strength of the issuing corporation as well as
11 market-wide factors, such as general changes in capital costs.

12 The capital markets reflect investor expectations and requirements each day
13 through market prices. Prices for stocks and bonds change to reflect investor
14 expectations and the relative attractiveness of one investment versus another.
15 While the example provided above seems straightforward, returns on common
16 stocks are not directly observable in advance, in contrast to debt or preferred stocks
17 with fixed payment terms. This means that these returns must be estimated from
18 market data. Estimating the cost of equity capital is a matter of informed judgment
19 about the relative risk of the company in question and the expected rate of return
20 characteristics of other alternative investments.

21 **Q. HOW IS THE COST OF EQUITY FOR A PARTICULAR UTILITY**
22 **DETERMINED?**

23 **A.** The estimation of a utility's cost of equity is complex. It requires an analysis of the
24 factors influencing the cost of various types of capital, such as interest on long-
25 term debt, dividends on preferred stock, and earnings on common equity. The data
26 for such an analysis comes from highly competitive capital markets, where the firm

1 raises funds by issuing common stock, selling bonds, and by borrowing (both long-
2 and short-term) from banks and other financial institutions. In the capital markets,
3 the cost of capital, whether the capital is in the form of debt or equity, is
4 determined by two important factors:

- 5 1) The pure or real rate of interest, often called the risk-free rate of
6 interest; and,
- 7 2) The uncertainty or risk premium (the compensation the investor
8 requires over and above the real or pure rate of interest for subjecting
9 his capital to additional risk).

10 **Q. PLEASE DISCUSS THESE FACTORS IN GREATER DETAIL.**

11 A. The pure rate of interest essentially reflects both the time preference for, and the
12 productivity of, capital. From the standpoint of the individual, it is the rate of
13 interest required to induce the individual to forego present consumption and offer
14 the funds thus saved to others for a specified length of time. Moreover, the pure
15 rate of interest concept is based on the assumption that no uncertainty affects the
16 investment undertaken by the individual, i.e., there is no doubt that the periodic
17 interest payments will be made and the principal returned at the end of the time
18 period. In reality, investments without risk do not exist. Every commitment of
19 funds involves some degree of uncertainty.

20 Turning to the second factor affecting the cost of capital, it is generally
21 accepted that the higher the degree of uncertainty, the higher the cost of capital.
22 Investors are regarded as risk adverse and require that the rate of return increase as
23 the risk (uncertainty) associated with an investment increase.

24 **Q. CAN YOU PROVIDE SOME PERSPECTIVE ON YOUR PREVIOUS**
25 **DISCUSSION WITH RESPECT TO RETURNS ON COMMON STOCKS?**

26 A. Yes. Conceptually,

1
2 [1] Required Return for Common Stocks = Return on a risk-free asset + Risk Premium
3

4 where the risk premium investors require for common stocks will be higher than
5 the risk premium they require for investment grade bonds. This relationship is
6 depicted in the graph of the CML, above. As I will discuss later in this testimony,
7 this concept is the basis of risk premium methods, such as the CAPM, that are used
8 to estimate the cost of equity.

9 **Q. WHAT HAS BEEN THE RECENT EXPERIENCE IN THE U.S. CAPITAL**
10 **MARKETS?**

11 A. In the past 10 years, inflation and capital market costs have generally declined.
12 Interest rates have been lower than in previous decades. Past inflation, as
13 measured by the Consumer Price Index, has been at relatively low levels in the past
14 10 years.

15 The roughly 6 year span of economic expansion after the 2001 recession
16 began to wane in 2007. Year-over-year GDP growth for 2004, 2005, and 2006 was
17 3.6 percent, 2.9 percent, and 2.8 percent, respectively. GDP growth was, in part,
18 spurred on by low interest rates during this period. The Federal Reserve, having
19 lowered the target Federal Funds rate to 1.0 percent by the end of 2003, began
20 raising interest rates in 2004 to help keep the economy from overheating and to
21 help keep inflation in check. By mid-2006, the Federal Reserve had raised the
22 target Federal Funds rate to 5.25 percent.

23 The economic expansion was broad, taking in the major consumer and
24 industrial sectors for much of its span. However, the economic expansion also
25 brought excesses, particularly in the areas of housing, lending practices, and the
26 financial markets.

1 Economic growth slowed in 2007. For 2007, the year-over-year GDP
2 growth had dropped to 2.0 percent with the last quarter of 2007 at a negative 0.3
3 percent. The slow economic growth combined with the excesses during the
4 economic expansion of the previous 6 years has created turmoil in the credit,
5 financial, and housing markets. This turmoil continues to have a significant drag
6 on the economy. Federal Reserve Chairman Ben Bernanke noted in recent
7 Congressional testimony that financial markets are currently under considerable
8 stress and that broader retrenchment in the willingness of investors to bear risk,
9 troubles in the credit markets and a weaker outlook of economic growth have
10 added to the stresses on economic growth.

11 In order to address the weakening economy, the Federal Reserve, starting in
12 September 2007, has taken a series of rate cut actions (425 basis points). The
13 reductions in interest rates by the Federal Open Market Committee were taken in
14 order to promote economic growth and to mitigate risks to economic activity. The
15 target Federal Funds rate stands at 1.0 percent and is expected to be lowered to 0.5
16 percent in the coming months.

17 GDP growth for the first three quarters of 2008 was 0.9 percent, 2.8 percent,
18 and negative 0.3 percent, respectively. It appears that the U.S. economy is now in
19 recession.¹ The Blue Chip Financial Forecast ("Blue Chip") consensus forecasts
20 (December 2008) of real GDP growth for the 4th quarter of 2008 is a negative rate
21 of 3.4 percent and growth for the first and second quarters of 2009 are a negative
22 1.6 and 0.1 percent, respectively. While economic growth is expected to turn
23 positive by second half of 2009, recovery is expected to be slow as there are risks
24 to the U.S. economy from a far more serious worldwide recession, the failure of the
25 housing market to stabilize in the year ahead, continued weakness in business and

26 ¹ A Recession is defined as two or more consecutive quarters of falling GDP.

1 consumer spending, and a setback to the war on terror.

2 One of the biggest risks to the economy stems from the conditions in the
3 credit markets. Without increased access and more affordable credit for consumers
4 and businesses, the prospects for a meaningful economic recovery are dim. The
5 stock market has had the worst year since 1931 and 1926 and has produced a
6 massive safe haven bid for Treasury debt. Recently, the three month Treasury bill
7 yields dropped to near zero, and yields on the two, five, ten and thirty year yield
8 treasuries fell to the lowest levels since the Treasury began regular sales of the
9 securities.

10 **Q. IS THERE A RELATIONSHIP BETWEEN THE COST OF EQUITY AND**
11 **INTEREST RATES?**

12 A. Yes. All things being equal, the cost of equity moves in the same direction as
13 interest rates. Lower interest rates on U.S Treasuries ("risk-free" rate) imply lower
14 equity returns and visa versa. However, as indicated by Equation 1 above, the risk
15 premium required to compensate investors also impacts the cost of equity. Higher
16 risk premiums required by investors imply higher equity costs and visa versa. Risk
17 premiums are impacted by uncertainty in future interest rates, business and
18 economic conditions, expected inflation, and other risk factors including interest
19 rate risk, business risk, regulatory risk, financial risk, construction risk, and
20 liquidity risk.

21 **Q. HOW DOES ALL THE SOUR ECONOMIC NEWS IMPACT INVESTORS?**

22 A. Like the Fed Chairman said—It makes investors want to hold on to their money
23 and put it in low risk investments.

24 **Q. IS BMSC AFFECTED BY THESE SAME MARKET UNCERTAINTIES**
25 **AND CONCERNS?**

26 A. Yes, in general, all investors are impacted by bad economic news, and the

1 Company's investors not immune to uncertainty and inflation. In fact, these
2 smaller utilities generally feel the impact worse because they are small, with a
3 small customer base and an inability to attract capital.

4 **Q. WHAT ARE THE RECENT DEVELOPMENTS IN THE WATER UTILITY**
5 **INDUSTRY AFFECTING UTILITY INVESTMENTS AND THE MARKET?**

6 A. I have already spoken in my summary of recent trends towards lower rates at later
7 and later dates in Arizona. On the whole, the water utility industry is expected to
8 continue to confront increasing infrastructure demand. According to the *Value*
9 *Line Investment Survey*, many utilities have infrastructures that are decades old and
10 in need of significant maintenance and, in some cases, massive renovation and
11 replacement. In addition, the EPA and state and local regulators continue to
12 impose more stringent environmental quality and operational standards, such as
13 new maximum contaminant levels for public drinking water systems. Additional
14 operational requirements have also been imposed to address the threat of bio-
15 terrorism on U.S. water systems. As infrastructure costs continue to climb, many
16 smaller companies are at a serious disadvantage. Without sufficient resources to
17 fund improvements to meet new and more stringent requirements, many smaller
18 companies are being forced to sell to larger utilities, which have greater operational
19 flexibility and resources, as well as access to capital. With the backdrop of
20 increasing infrastructure costs, merger and acquisition activity is expected to
21 continue at a feverish pace.

22 **Q. WOULD YOU PLEASE DISCUSS IN MORE DETAIL THE IMPACT OF**
23 **RISK ON CAPITAL COSTS?**

24 A. With reference to specific utilities, risk is often discussed as consisting of two
25 separate types of risk: business risk and financial risk.

26 Business risk, the basic risk associated with any business undertaking, is the

1 uncertainty associated with the enterprise's day-to-day operations. In essence, it is
2 a function of the normal day-to-day business environment, both locally and
3 nationally. Business risks include the condition of the economy and capital
4 markets, the state of labor markets, regional stability, government regulation,
5 technological obsolescence, and other similar factors that may impact demand for
6 the business product and its cost of production. For utilities, business risk also
7 includes the volatility of revenues due to abnormal weather conditions, degree of
8 operational leverage, regulation, and regulatory climate. Regulation, for example,
9 can compound the business risk if it is unpredictable in reacting to cost increases
10 both in terms of the time lag and magnitude. Regulatory lag makes it difficult to
11 earn a reasonable return particularly in an inflationary environment and/or when
12 there is significant lag between the timing of investment in capital projects and its
13 recognition in rates. Put simply, the greater the degree of uncertainty regarding the
14 various factors affecting a company's business, the greater the risk of an
15 investment in a company and the greater the compensation required by the
16 investor.

17 Financial risk, on the other hand, concerns the distribution of business risk
18 to the various capital investors in the utility. As I discussed earlier, permanent
19 capital is normally divided into three categories: long-term debt, preferred stock,
20 and common equity. Because common equity owners have only a residual claim
21 on earnings after debt and preferred stockholders are paid, financial risk tends to be
22 concentrated in this element of the firm's capital. Thus, a decision by management
23 to raise additional capital by issuing additional debt concentrates even more of the
24 financial risk of the utility in the common equity owners.

25 An important component of financial risk is construction risk. Construction
26 risk refers to the magnitude of a company's capital budget. If a company has a

1 large construction budget relative to internally generated cash flows it will require
2 external financing. It is important that companies have access to capital funds on
3 reasonable terms and conditions. Utilities are more susceptible to construction risk
4 for two reasons. First, utilities generally have high capital requirements to build
5 plant to serve customers. Second, utilities have a mandated obligation to serve,
6 leaving less flexibility both in the timing and discretion of scheduling capital
7 projects. This is compounded by the limited ability of a utility to wait for more
8 favorable market conditions to raise the capital necessary to fund the capital
9 projects.

10 Although often discussed separately, the two types of risks (business and
11 financial) are actually interrelated. Specifically, a common equity investor may
12 seek to offset exposure to high financial risk by investing in a firm perceived to
13 have a low degree of business risk. In other words, the total risk to an investor
14 would be high if the enterprise was characterized as a high business risk with a
15 large portion of its permanent capital financed with senior debt. To attract capital
16 under these circumstances, the firm would have to offer higher rates of return to its
17 common equity investors. I would also note, while the water utilities in the sample
18 have recently encountered a more favorable regulatory environment in many states,
19 such as California, this has not been the case in Arizona. As a result, utilities in
20 Arizona are finding it increasingly difficult to attract capital.

21 **IV. THE MEANING OF "JUST AND REASONABLE" RATE OF RETURN.**

22 **Q. HAVE THE COURTS SET FORTH ANY CRITERIA THAT GOVERN THE**
23 **RATE OF RETURN THAT A UTILITY'S RATES SHOULD PRODUCE?**

24 **A.** Yes. In 1923, the U.S. Supreme Court set forth the following criteria for
25 determining whether a rate of return is reasonable in *Bluefield Water Works and*
26

1 *Improvement Co. v. Public Service Commission of West Virginia*, 262 U.S. 679,
2 692-93 (1923):

3 A public utility is entitled to such rates as will permit it to earn a
4 return on the value of the property which it employs for the
5 convenience of the public equal to that generally being made at the
6 same time and in the same general part of the country on investments
7 on other business undertaking which are attended by corresponding
8 risks and uncertainties The return should be reasonably sufficient
9 to assure confidence in the financial soundness of the utility and
 should be adequate, under efficient and economical management to
 maintain and support its credit and enable it to raise money necessary
 for the proper discharge of its public duties. A rate of return may be
 reasonable at one time and become too high or too low by changes
 affecting opportunities for investment, the money market, and
 business conditions generally.

10 In summary, under *Bluefield Water Works*:

- 11 (1) The rate of return should be similar to the return in businesses with
12 similar or comparable risks;
13 (2) The return should be sufficient to ensure the confidence in the
14 financial integrity of the utility; and
15 (3) The return should be sufficient to maintain and support the utility's
16 credit.

17 In addition to being widely followed by courts and regulatory commissions,
18 the Court's discussion of the criteria that should be used to determine a reasonable
19 rate of return is important because *Bluefield Water Works* involved the application
20 of the "fair value" standard, which is embodied in the Arizona Constitution. Thus,
21 in discussing the criteria for determining a fair rate of return, the Court applied the
22 rate of return, judged according these criteria, to the current or "fair" value of the
23 utility's plant and property devoted to public service.

24 **Q. HOW HAVE THESE CRITERIA BEEN APPLIED IN REGULATORY**
25 **PROCEEDINGS?**

26 **A. Yes, but the application of the "reasonableness" criteria laid down by the Supreme**

1 Court has resulted in controversy. The typical method of computing the overall
2 cost of capital is quite straightforward: it is the composite, weighted cost of the
3 various classes of capital (debt, preferred stock, and common equity), used by the
4 utility. The weighting is done by calculating the proportion that each class of
5 capital bears to total capital. However, there is no consensus regarding the best
6 method of estimating the cost of equity capital. The increasing regulatory
7 emphasis on objectivity in determining the rate of return has resulted in a
8 proliferation of market-based finance models that are used in equity return
9 determination. As will be discussed more fully below, however, none of these
10 models are universally accepted as the "correct" means of estimating the ROE.

11 **V. THE ESTIMATED COST OF EQUITY FOR THE COMPANY.**

12 **A. The Publicly Traded Utilities That Comprise the Sample Group Used to**
13 **Estimate the Company's Cost of Equity.**

14 **Q. PLEASE BRIEFLY DESCRIBE THE APPROACH YOU FOLLOWED IN**
15 **YOUR COST OF CAPITAL ANALYSIS FOR BMSC.**

16 **A.** As I have stated, estimating the cost of equity is a matter of informed judgment.
17 The development of an appropriate rate of return for a regulated enterprise involves
18 the determination the level of risk associated with that enterprise and the
19 determination of an appropriate return for that risk level. Practitioners employ
20 various techniques that provide a link to actual capital market data and assist in
21 defining the various relationships that underlie the equity cost estimation process.

22 Since BMSC is not publicly traded, the information required to directly
23 estimate BMSC's cost of equity is not available. Accordingly, I used a sample
24 group of water utilities as a starting point to develop an appropriate cost of equity
25 for BMSC. There are six water utilities included in the sample group: American
26 States Water, Aqua America, California Water, Connecticut Water, Middlesex

1 Water, and SJW Corp. All these companies are followed by the *Value Line*
2 *Investment Survey*, and, as explained previously, these particular utilities have
3 consistently been used by the Staff to estimate the cost of equity in a number of
4 recent water and sewer utility rate cases.

5 **Q. ARE THE WATER UTILITIES IN YOUR SAMPLE DIRECTLY**
6 **COMPARABLE TO BMSC?**

7 A. No, but they are utilities for which market data is available. All of them are
8 regulated, they primarily provide water service, although some provide both water
9 and wastewater services, and their primary source of revenues is from regulated
10 services. Therefore, they provide a useful starting point for developing a cost of
11 equity for BMSC. I emphasized "starting point" because BMSC is not publicly
12 traded, there is no market data available for smaller utilities, like BMSC, that can
13 be used to develop cost of equity estimates.

14 **Q. DOES THE MARKET DATA PROVIDED BY THE WATER UTILITY**
15 **SAMPLE CAPTURE ALL OF THE MARKET RISKS THAT BMSC**
16 **MIGHT FACE IF IT WERE PUBLICLY TRADED?**

17 A. In my opinion, no. First, as I stated, there is no comparable market data for utility
18 companies the size of BMSC. The average revenue of the water utility sample
19 companies is nearly 174 times that of BMSC and the average net plant of the water
20 utility sample companies is nearly 149 times that of BMSC. Even the smallest
21 company in the sample, Connecticut Water, has nearly 42 times the net plant of
22 BMSC, and nearly 39 times the revenues.

23 Second, market data for the sample water utilities do not include data for
24 water and sewer utilities primarily serving the Arizona market and thus primarily
25 subject to Arizona rate regulation. The Commission requires the use of historical
26 test years with limited out-of-period adjustments. Moreover, current Commission

1 policy strongly disfavors adjustment mechanisms that allow for prompt recovery of
2 increases in the cost of purchased water and power, in contrast to other
3 jurisdictions. In short, the Commission's current policies make it difficult for
4 water or sewer utilities to earn their authorized rates of return.

5 **Q. HOW DOES THIS IMPACT BMSC?**

6 A. BMSC faces the risk that changes in costs, both unexpected and expected, during
7 the period in which new rates will be in effect will not be recovered without
8 another costly and lengthy general rate case. The water sample is heavily weighted
9 with utilities doing business in California. American States, California Water, and
10 SJW Corp. are based in California and receive the bulk of revenues from utility
11 service in that state. These utilities face less regulatory risk because the California
12 Public Utilities Commission allows the use of future test years and balancing
13 accounts for expenses such as purchased water and power. Aqua America, the
14 largest water utility in the group, has operations in more than 12 states. As a result,
15 Aqua America's systems are regulated by different state commissions and are less
16 affected by unfavorable decisions and policies of a particular regulatory
17 commission.

18 **Q. PLEASE PROVIDE A GENERAL DESCRIPTION OF THE WATER**
19 **UTILITIES IN YOUR SAMPLE.**

20 A. Schedule D-4.1 lists the operating revenues and net plant for the six water utilities
21 as reported by AUS Utility Reports (formerly C.A. Turner Utility Reports) and
22 BMSC. In addition, below is a general description of each of the companies:

- 23 (1) American States Water (AWR) primarily serves the California
24 market through Southern California Water Company, which provides
25 water services to over 254,000 customers and electric utility service
26 to over 23,000 customers within 75 communities in 10 counties in

1 the State of California, primarily in Los Angeles, San Bernardino,
2 and Orange counties. It has one subsidiary serving the Arizona
3 market with approximately 13,000 customers in Fountain Hills and
4 Scottsdale. Approximately 91 percent of American States revenues
5 were derived commercial and residential water customers. Revenues
6 for American States were over \$301 million in 2007 and net plant
7 was over \$677 million at the end of 2007.

8 (2) Aqua America (WTR) owns regulated utilities in Pennsylvania,
9 Ohio, North Carolina, Illinois, Texas, New Jersey, Florida, Indiana,
10 Virginia, Maine, Missouri, New York, and South Carolina, serving
11 over 950,000 customers at the end of 2007. The Company's utility
12 base is diversified among residential water, commercial water, fire
13 protection, industrial water, other water, and wastewater customers.
14 Residential customers make up over 69 percent of its water revenues.
15 Total revenues for Aqua America were over \$602 million in 2007
16 and net plant was over \$2.4 billion at the end of 2007.

17 (3) California Water Service Group (CWT) owns subsidiaries in
18 California, New Mexico, Washington, and Hawaii serving over
19 490,000 customers. The California operations account for over 95
20 percent of customers and over 96 percent of operating revenues.
21 Revenues for California Water were over \$367 million in 2007 and
22 net plant was over \$890 million at the end of 2007.

23 (4) Connecticut Water Services (CTWS) owns subsidiaries in
24 Connecticut and Massachusetts serving over 84,000 customers.
25 Revenues for Connecticut Water Service were over \$59 million in
26 2007 and net plant was over \$229 million at the end of 2007.

1 (5) Middlesex Water (MSEX) owns subsidiaries in New Jersey and
2 Delaware serving over 90,000 customers and provides water service
3 under contract to municipalities in central New Jersey to a population
4 of over 267,000. Revenues for Middlesex Water were over \$86
5 million in 2007 and net plant was over \$297 million at the end of
6 2007.

7 (6) SJW Corp. (SJW) owns San Jose Water, which provides water
8 service in a 138 square mile area in San Jose, California, and
9 surrounding communities. Revenues for SJW Corp were over \$206
10 million in 2007 and net plant was over \$460 million at year-end.

11 **Q. HOW DOES BMSC COMPARE TO THE SAMPLE WATER UTILITIES?**

12 A. It is much smaller. At the end of the test year, BMSC had approximately 2,100
13 wastewater customers. Its wastewater revenues totaled a little under \$1.6 million,
14 and its wastewater net plant-in-service was approximately \$5.7 million. BMSC is
15 not geographically diversified. It has a very small service territory in Northeast
16 Maricopa County compared to the sample companies, and no alternative sources of
17 revenue.

18 **Q. IT DOESN'T APPEAR THAT BMSC IS ACTUALLY COMPARABLE TO**
19 **THE SAMPLE WATER UTILITIES.**

20 A. For the reasons I have stated, a good argument could be made that BMSC is not
21 comparable to the six publicly traded water utilities in the same group.
22 Unfortunately, as I testified, the approaches commonly used to estimate a utility's
23 cost of equity require market data, which is not available for smaller companies,
24 like BMSC. As a result, much larger, public companies must be used as proxies.
25 The emphasis on proxy is important. The criteria established by the Supreme
26 Court in decisions such as *Bluefield Water Works* require the use of comparable

1 companies, i.e., companies that would be viewed by investors as having similar
2 risks. A rational investor would not regard BMSC has having the same level of
3 risk as Aqua America or even Connecticut Water. Consequently, the results
4 produced by the DCF and CAPM methodologies, utilizing data for the sample
5 utilities, often understates the appropriate return on equity for an Arizona-regulated
6 water or sewer provided.

7 **Q. YOU PREVIOUSLY DISCUSSED FINANCIAL RISK, WHICH IS**
8 **RELATED TO A FIRM'S CAPITAL STRUCTURE. HOW DO THE**
9 **CAPITAL STRUCTURES OF THE SAMPLE WATER UTILITIES**
10 **COMPARE TO BMSC?**

11 A. Schedule D-4.2 shows the capital structure of BMSC contains 19.3 percent debt
12 and 81.7 percent equity compared to the average of the water utility sample of 48.5
13 percent debt and 51.5 percent equity. Having less debt in its capital structure
14 implies less financial risk than the water utility sample, which may offset the other
15 factors that make BMSC more risky than the sample group.

16 B. Current Stocks Prices and Their Effect on Estimating the Cost of
17 Equity.

18 **Q. DO YOU HAVE ANY GENERAL CONCERNS WITH THE DATA**
19 **AVAILABLE TO MAKE COST OF EQUITY ESTIMATES FOR THE**
20 **WATER UTILITIES?**

21 A. Yes. Schedule D-4.3 shows that common stock prices have increased significantly
22 during the past five years, and those increases have exceeded the average annual
23 increases in dividends per share ("DPS"), earnings per share ("EPS") and book
24 value per share. As a result, the current market-to-book ratio for the sample water
25 utilities is approximately 2.0.

26 *Value Line* (January 2004) has suggested that, in part, the reason for

1 increases in the stock prices is consolidation in the water utility industry. In
2 January 2004, *Value Line* advised investors to expect stock prices from an
3 acquisition to be as much as four times book value. *Value Line* (October 2008)
4 continues to advise investors to expect mergers and acquisitions.

5 Irrespective of investor merger and acquisition expectations or other current
6 market conditions, stock price growth has exceeded book growth and both stock
7 price growth, and book growth have all exceeded dividends and earnings growth.
8 Schedule D-4.4 shows that common stock prices have had annual price increases
9 during the past 10 years that have exceeded the annual increases in dividends per
10 share, earnings per share, and book value per share. The market-to-book ratios of
11 most publicly traded utilities, including the sample utilities, have been well above
12 1.0 for a number of years, and there is no reason to expect those ratios to
13 significantly change in the future, given continuing the conditions in the stock
14 market and overall economic conditions.

15 **Q. WHAT IMPLICATIONS DOES THIS HAVE FOR ESTIMATING THE**
16 **COST OF EQUITY USING THE SAMPLE WATER UTILITIES?**

17 A. If investors have bid up prices for utility stocks in anticipation of a merger or
18 acquisition, the stock prices will reflect the investor's expected premium at
19 acquisition. This distorts the results produced by the DCF model by
20 underestimating dividend yield, lowering the indicated equity cost.

21 Alternatively, investors may have bid up the prices for the water utility
22 stocks because they expect increases in earnings and dividends in the future. In
23 other words, investors expect the water utilities to be authorized, and to actually
24 earn higher returns on equity. *Value Line* (April 2007), for example, has advised
25 investors that the extremely consumer-conscious regulatory environments of the
26 past several years and the corresponding delayed rate relief and unfavorable

1 decisions appear to be at an end, especially in California. The recognition of
2 increasing favorable regulatory environment continues to provide share-price
3 strength. Value Line (October 2008) suggests that utility stocks, with some
4 perceived safety compared to the broader market, will likely outpace the broader
5 market averages during the next year due to seemingly unending volatility of the
6 stock market in the past 6 to 12 months.

7 There is no doubt investor expectations are influenced by more favorable
8 regulation and the current high volatility of the broader market. We can only hope
9 that Arizona's regulators understand that lower rates means less capital investment
10 and a lower quality of service. Shareholders won't keep chasing bad investment
11 with more capital, nor will they continue to subsidize the provision of service
12 waiting for the regulatory system to fix itself.

13 **C. Overview of the DCF and CAPM Methodologies.**

14 **Q. PLEASE EXPLAIN THE GENERAL APPROACHES TO ESTIMATING**
15 **THE COST OF CAPITAL.**

16 **A.** There two broad approaches:

- 17 1) identify comparable-risk sample companies and estimate the cost of
18 capital directly, and,
- 19 2) find the location of the CML and estimate the relative risk of the
20 company that jointly determines the cost of capital.

21 The DCF model is an example of a method falling into the first general
22 approach. It is a direct method, but uses only a subset of the total capital market
23 evidence. The DCF model rests on the premise that the fundamental value of an
24 asset (stock) is its ability to generate future cash flows to the owner of that asset
25 (stock). I will explain the DCF model in more detail later. For now, the DCF is
26 simply the sum of a stock's expected dividend yield and the expected long-term

1 growth rate. Dividend yields are readily available, but long-term growth estimates
2 are more difficult to obtain.

3 The CAPM is an example of a method falling into the second general
4 approach. It uses information on all securities rather than a small subset. I will
5 explain the CAPM in more detail later. For now, the CAPM is a risk-return
6 relationship, often depicted graphically as the CML. The CAPM is the sum of a
7 risk-free return and a risk premium.

8 Each of these two methods has their own way of measuring investor
9 expectations. In the final analysis, ROE estimates are subjective and should be
10 based on sound, informed judgment. I have applied several versions of the DCF,
11 and two versions of the CAPM to "bracket" the fair cost of equity capital for
12 BMSC, but without taking into account the additional risks that BMSC possesses.

13 **D. Explanation of the DCF Model and Its Inputs.**

14 **Q. PLEASE EXPLAIN THE DCF METHOD OF ESTIMATING THE COST OF**
15 **EQUITY.**

16 **A.** The DCF model is based on the concept that the current price of a share of stock is
17 equal to the present value of future cash flows from the purchase of the stock. In
18 other words, the DCF model is an attempt to replicate the market valuation process
19 that sets the price investors are willing to pay for a share of a company's stock. It
20 rests on the assumption that investors rely on the expected returns (i.e., cash flow
21 they expect to receive) to set the price of a security. The DCF model in its most
22 general form is:

23
$$(2) \quad P_0 = CF_1/(1+k) + CF_2/(1+k)^2 + \dots + CF_n/(1+k)^n$$

24 where k is the cost of equity; n is a very large number; P_0 is the current stock price;
25 and, CF_1, CF_2, \dots, CF_n are all the expected future cash flows expected to be received
26 in periods 1, 2, ... n.

Equation (2) can be written to show that the current price (P_0) is also equal to

$$(3) \quad P_0 = CF_1/(1+k) + CF_2/(1+k)^2 + \dots + P_t/(1+k)^t$$

where P_t is the price expected to be received at the end of the period t . If the future price (P_t) included a premium (an expected increase in the stock price or capital gain), the price the investor would pay today in anticipation of receiving that premium would increase. In other words, by estimating the cash flows from the purchase of a stock in the form of dividends and capital gains, we can calculate the investor's required rate of return, i.e., the rate of return an investor presumptively used in bidding the current price to the stock (P_0) to its current level.

Equation (3) is a Market Price version of the DCF model. As with the general form of the DCF model in equation (2), in the Market Price approach the current stock price (P_0) is the present value of the expected cash inflows. The cash flows are comprised of dividends and the final selling price of the stock. The estimated cost of equity (k) is the rate of return investors expect if they bought the stock at today's price, held the stock and received dividends through the transition period, and then sold it for price (P_t).

Q. CAN YOU PROVIDE AN EXAMPLE TO ILLUSTRATE THE MARKET PRICE VERSION OF THE DCF MODEL?

A. Yes. Assume an investor buys a share of common stock for \$40. If the expected dividend during the coming year is \$2.00, then the expected dividend yield is 5 percent ($\$2.00/\$40 = 5.0$ percent). If the stock price is also expected to increase to \$43.00 after one year, this \$3.00 expected gain adds an additional 7.5 percent to the expected total rate of return ($\$3.00/\$40 = 7.5$ percent). Thus, the investor buying the stock at \$40 per share, expects a total return of 12.5 percent (5 percent dividend yield plus 7.5 percent price appreciation). The total return of 12.5 percent is the

1 appropriate measure of the cost of capital because this is the rate of return that
2 caused the investor to commit \$40 of his capital by purchasing the stock.

3 I have provided a Market Price DCF model in Exhibit 1 to illustrate the
4 Market Price DCF model approach further. The model computes the implied rate
5 of return from a stream of cash flows. The first cash flow is negative and is the
6 purchase price of the stock. I used the spot price at November 21, 2008, as
7 reported by Value Line as the initial purchase price. The next series of cash flows
8 are the expected dividends for the next four years. The final cash flow is the
9 dividend in year 5 plus the expected selling price of the stock. The selling price of
10 the stock is based on the historical 5-year average annual price growth for each of
11 the stocks. The average implied rate of return is over 15 percent.

12 **Q. HOW DOES THE RESULT OF YOUR MARKET PRICE DCF COMPARE**
13 **TO THE HISTORICAL COMPOUND ANNUAL MARKET RETURNS FOR**
14 **THE WATER UTILITY SAMPLE?**

15 A. As shown in Exhibit 2, the average 5-year historical compound annual total market
16 return for the water utility sample is over 15 percent. I cannot compare total market
17 returns for AZ water and wastewater utilities because there is no market data.
18 Despite the fact that the historical 5-year total market returns as well as the market
19 price DCF indicate returns in the range of 15 percent, I do not rely on this method.
20 I have instead used it to evaluate the reasonableness of the results produced by the
21 other versions of my DCF model.

22 **Q. PLEASE CONTINUE WITH YOUR DESCRIPTION OF THE DCF**
23 **MODEL.**

24 A. Under the assumption that future cash flows are expected to grow at a constant rate
25 ("g"), equation (1) can be solved for k and rearranged into the simple form:

26
$$(4) \quad k = CF_1/P_0 + g$$

1 where CF_1/P_0 is the expected dividend yield and g is the expected long term
2 dividend (price) growth rate ("g"). The expected dividend yield is computed as the
3 ratio of next period's expected dividend (" CF_1 ") divided by the current stock price
4 (" P_0 "). This form of the DCF model is known as the constant growth DCF model
5 and recognizes that investors expect to receive a portion of their total return in the
6 form of current dividends and the remainder through future dividends and capital
7 (price) appreciation. A key assumption of this form of the model is that investors
8 expect that same rate of return (k) every year and that market price grows at the
9 same rate as dividends. This has not been historically true for the water utility
10 sample, as shown by the data shown in Schedules D-4.3 and D-4.4. As a result,
11 estimates of long-term growth rates (g) should take this into account.

12 **Q. HOW IS THE FORMULA FOR THE MULTI-STAGE DCF MODEL**
13 **DERIVED?**

14 A. Under the multi-stage growth DCF model, equation (1) is expanded to incorporate
15 two or more growth rate periods and is written as:

$$(5) P_0 = CF_0(1+g_1)/(1+k) + \dots + CF_0(1+g_2)^n/(1+k)^n + CF_0(1+g_t)^{(t+1)}/(k-g_t)$$

17 where g_1 , g_2 , etc., represent growth rates for periods 1, 2, etc., and g_t represents the
18 growth rate from period t to infinity. This version of the DCF model assumes that
19 cash flow growth will occur at different rates for one or more periods and
20 ultimately reach a terminal growth stage that continues indefinitely.

21 **Q. ARE THERE ANY GENERAL CONCERNS ABOUT APPLYING THE DCF**
22 **MODEL TO UTILITY STOCKS?**

23 A. There are a number of reasons why caution must be used when applying the DCF
24 model to utility stocks. First, as I have already discussed, the stock price and
25 dividend yield component may be unduly influenced by structural changes in the
26 industry, such as mergers and acquisitions, which influence investor expectations.

1 Second, the DCF model is based on a number of assumptions which may not be
2 realistic given the current capital market environment. The traditional DCF model
3 assumes that the stock price, book value, dividends, and earnings all grow at the
4 same rate. This has not been historically true for the sample water utility
5 companies. Third, the application of the DCF model produces estimates of the cost
6 of equity that are consistent with investor expectations only when the market price
7 of a stock and the stock's book value are approximately the same. The DCF model
8 will understate the cost of equity when the market-to-book ratio exceeds 1.0 and
9 conversely will overstate the cost of equity when the market-to-book ratio is less
10 than 1.0. The reason for this is that the market-derived return produced by the
11 DCF is often applied to book value rate base by regulators. Fourth, the assumption
12 of a constant growth rate may be unrealistic, and there may be difficulty in finding
13 an adequate proxy for the growth rate. Historical growth rates can be downward
14 biased as a result of the impact of acquisitions, mergers, unfavorable regulatory
15 decisions, and even abnormal weather patterns.

16 **Q. LET'S TURN TO THE SPECIFIC INPUTS USED IN YOUR DCF MODELS.**
17 **WHAT DATA HAVE YOU USED TO COMPUTE THE DIVIDEND YIELD**
18 **(CF_1/P_0) IN YOUR MODELS?**

19 A. I used the spot price for each of stocks of the water utilities in the sample group on
20 November 21, 2008 as reported by Value Line. The dividend is the expected
21 dividend for the next year.

22 **Q. EARLIER YOU TESTIFIED THAT STOCK PRICES HAVE BEEN**
23 **INCREASING DUE TO STRUCTURAL CHANGES--HOW DO SUCH**
24 **CHANGES IMPACT THE DIVIDEND YIELD?**

25 A. The DCF model results will be negatively biased because the dividend yield
26 (CF_1/P_0) is reduced by virtue of having a larger denominator, the stock price (P_0).

1 This impact is not by itself problematic because the DCF model is intended to take
2 into account changes in the stock price (upward or downward). Investors may have
3 bid up the price of the stocks of the water utilities in the sample group because they
4 expect increased growth in earnings and, as a result, increased dividend growth and
5 appreciation in the price of the stock. However, if stock prices have been bid up in
6 anticipation of a merger or an acquisition, then the DCF model estimate will not
7 reflect true market conditions and understate the cost of equity.

8 **Q. WHAT MEASURES OF GROWTH (“g”) HAVE YOU USED?**

9 A. I have used earnings growth forecasts, where available, from three different,
10 widely-followed sources: *Zack’s Investment Research*, *Standard & Poor Earnings*
11 *Guide*, and *Value Line Investment Survey*. Schedule D-4.6 reflects estimates of
12 earnings growth. The currently available estimates from these three sources
13 provide at least two estimates for each of the sample water utility companies.
14 There are three estimates for the majority of the companies.

15 I have also used forecasts of book returns, retention ratios, and growth in the
16 number of common shares from *Value Line* to determine sustainable growth
17 estimates, which I describe in more detail below. Schedules D-4.7 and D-4.8 show
18 my calculations of sustainable growth.

19 For the multi-stage DCF, I employed a two-stage model with short-term and
20 long-term growth rates. I used analysts’ forecasts of EPS growth for the near term
21 and average long-term GDP growth for the long-term.

22 **Q. DID YOU USE THE ARITHMETIC MEAN OR THE GEOMETRIC MEAN**
23 **FOR GDP GROWTH?**

24 A. The arithmetic mean. It is well established that if the cost of capital is estimated
25 from historical data, an arithmetic average should be used. Dr. Morin, in his text
26 on regulatory finance, provides a detailed explanation of why this is the case, citing

1 various authorities, including Professors Brealey, Myers and Allen, authors of the
2 leading graduate textbook on corporate finance.²

3 **Q. WHY DID YOU USE FORECASTED GROWTH RATES IN YOUR**
4 **MODELS?**

5 A. The DCF model requires estimates of growth that investors expect in the future.
6 Accordingly, I used analysts' forecasts of growth. Logically, in estimating future
7 growth, financial institutions and analysts have taken into account all relevant
8 historical information on a company as well as other more recent information.³ To
9 the extent that past results provide useful indications of future growth prospects,
10 analysts' forecasts would already incorporate that information. In addition, a
11 stock's current price reflects known historic information on that company,
12 including its past earnings history. Any further recognition of the past will double
13 count what has already occurred. Therefore, forward-looking growth rates should
14 be used.

15 **Q. HAVE YOU COMPARED THE ANALYSTS' ESTIMATES OF GROWTH**
16 **WITH HISTORICAL DATA?**

17 A. Yes. As shown in Exhibit 3, the average 5-year historical compound annual capital
18 (price) appreciation is 12.27 percent. The average 10-year historical compound
19 annual capital (price) appreciation is 11.28 percent. This is significantly higher
20 than the average of the analysts' estimates of growth of 9.03 percent as shown on
21 Schedule D-4.5. While historical returns do not necessarily reflect what will occur
22 in the future, the analysts' estimates of EPS growth are significantly less than the
23 historical capital appreciation and the historical total returns. Thus, I believe using

24
25 ² Roger A. Morin, *New Regulatory Finance* (2006) 133-43.

26 ³ David A. Gordon, Myron J. Gordon and Lawrence I. Gould, "Choice Among Methods of
Estimating Share Yield," *Journal of Portfolio Management* (Spring 1989) 50-55.

1 the analysts' estimates of EPS growth for the growth rate in the DCF model is
2 conservative.

3 **Q. WHY DIDN'T YOU USE FORECASTS OF DIVIDEND GROWTH?**

4 A. Primarily because of the limited availability of analyst estimates of dividend
5 growth for the utility sample companies. Forecasts are available for only three of
6 the six sample companies. A second reason is that of the three DCF estimates that
7 can be made two are less than the current cost of investment grade bonds - one
8 produces an indicated cost of equity of only 3.9 percent.

9 **Q. HAVE YOU PREPARED CONSTANT GROWTH DCF ESTIMATES**
10 **USING ANALYSTS' ESTIMATES OF DPS GROWTH?**

11 A. Yes. Exhibit 4, attached hereto, reflect constant growth DCF results using
12 analysts' estimates of DPS growth. The average result is 7.2 percent well below
13 the current cost of investment grade bonds at 9.0 percent.

14 **Q. HAVE YOU PREPARED CONSTANT GROWTH DCF MODELS USING**
15 **HISTORICAL DPS AND EPS GROWTH RATES?**

16 A. Yes. Exhibit 5, attached hereto, reflects constant growth DCF results using five-
17 year historical annual growth rates for DPS. The DCF results using five-year
18 historical annual growth rates using historical DPS growth is 7.2 percent - below
19 the current cost of investment grade bonds. Five of the six estimates are
20 significantly below the cost of debt, with the lowest being only 3.6 percent.

21 Exhibit 6, attached hereto, reflects constant growth DCF results using five-
22 year historical annual growth rates for EPS. The range of cost of equity estimates
23 using historical EPS growth are 7.1 percent to 11.4 percent with the average of the
24 estimates being 9.2 percent. Two of the six estimates are well below the cost of
25 debt with one as low as 7.1 percent. If these two estimates are removed, the
26 average result is 10.1 percent.

1 **Q. WHY HAVEN'T YOU INCLUDED ANALYSTS' FORECASTS OF DPS**
2 **GROWTH AND HISTORICAL DPS GROWTH IN YOUR DCF ESTIMATE**
3 **OF GROWTH?**

4 A. Using analysts' forecasts of DPS growth and historical DPS growth results in
5 returns that are unrealistic. It is important to keep in mind that there is a great deal
6 of empirical evidence demonstrating that, on average, stocks are riskier than bonds
7 and achieve higher returns. Morningstar (formerly Ibbotson Associates), for
8 example, annually publishes its comprehensive study of historical returns on stocks
9 and bonds.⁴

10 Putting aside the potential distortions to the result produced by the DCF
11 model caused by structural changes to the industry and abnormal weather
12 conditions, it does not make sense to employ grow rates that result in indicated
13 equity returns less than the cost of debt, especially when those results fly in the
14 face of a large body of empirical evidence. Investors would not bid up the price of
15 a utility stock if the expected return is equivalent to returns on bonds and other debt
16 investments. As the CML depicted previously illustrates, common stocks are
17 higher and to the right of investment grade bonds on the CML continuum because
18 they are riskier investments. Again, the empirical evidence supports this
19 conclusion. The results using the analysts' expectations of DPS growth and
20 historical DPS growth are unreasonable.

21 **Q. YOU MENTIONED SUSTAINABLE GROWTH EARLIER. PLEASE**
22 **EXPLAIN WHAT SUSTAINABLE GROWTH IS?**

23 A. Sustainable growth is derived by combining the expected growth from future
24 retained earnings and expected future growth from sales of common stock. The
25 growth rate (g) becomes:

26 ⁴ Morningstar, *SBBI Valuation Edition 2006 Yearbook*.

1 (6) $g = br + sv$

2 where b is the expected retention ratio; r is the expected return on common equity;
3 s is the funds raised from the sale of stock as a fraction of existing common equity;
4 and v is the fraction of funds raised from the sale of stock that accrues to
5 shareholders.

6 **Q. HOW DID YOU ESTIMATE “br” GROWTH?**

7 A. I used projected rates of return, dividends per share, and earnings per share
8 reported in *Value Line* to estimate “br” growth.

9 **Q. HOW DID YOU ESTIMATE “sv” GROWTH?**

10 A. I used *Value Line*’s projections of new issues of common stock to estimate “s” and
11 reported books values and the spot price to estimate “v”. All of the water utility
12 stocks used in my sample are currently selling at prices above book value and thus
13 have “sv” growth.

14 **Q. HOW DO YOUR ESTIMATES FOR SUSTAINABLE GROWTH**
15 **COMPARE TO THE HISTORICAL COMPOUND ANNUAL CAPITAL**
16 **APPRECIATION RETURN?**

17 A. The average sustainable growth for the utility sample as shown in Schedule D-4.7
18 is 7.26 percent, which is lower than the average 5-year and 10-year historical
19 compound annual capital appreciation return of 12.27 percent and 11.28 percent,
20 respectively.

21 **E. Explanation of the CAPM and Its Inputs.**

22 **Q. PLEASE EXPLAIN THE CAPM METHODOLOGY FOR ESTIMATING**
23 **THE COST OF EQUITY.**

24 A. As I already indicated, the CAPM is a type of risk premium methodology that is
25 often depicted graphically in a form identical to the CML. Put simply, the CAPM
26 formula is the sum of a risk-free rate plus a risk premium. It quantifies the

1 additional return required by investors for bearing incremental risk. The risk-free
2 rate is the reward for postponing consumption by investing in the market. The risk
3 premium is the additional return compensation for assuming risk.

4 The CAPM formula provides a formal risk-return relationship premised on
5 the idea that only market risk matters, as measure by beta. The CAPM formula is:

6
$$(7) \quad k = R_f + \beta(R_m - R_f)$$

7 where k is the expected return, R_f is the risk-free rate, R_m is the market return, $(R_f -$
8 $R_m)$ is the market risk premium, and β is beta.

9 The difficulty with the CAPM is that it is a prospective or forward-looking
10 model while most of the capital market data required to match the input variables
11 above is historical.

12 **Q. WHAT IS THE RISK-FREE RATE?**

13 A. It is the return on an investment with no risk. U.S. Treasury rates serve as the basis
14 for the risk-free rate because the yields are directly observable in the market and
15 are backed by the U.S. government. Practically speaking, short-term rates are
16 volatile, fluctuate widely and are subject to more random disturbances than long-
17 term rates. In short, long-term Treasury rates are preferred for these reasons and
18 because long-term rates are more appropriately matched to securities with an
19 indefinite life or long-term investment horizon.

20 **Q. WHAT IS BETA AND WHAT DOES IT MEASURE?**

21 A. Beta is measure of the relative risk of a security and the market. In other words, it
22 is a measure of the sensitivity of a security to the market as a whole. This
23 sensitivity is also known as systematic risk. It is estimated by regressing a
24 security's excess returns against a market portfolio's excess returns. The slope of
25 the regression line is the beta.

26 Beta for the market is 1.0. A security with a beta greater than 1.0 is

1 considered riskier than the market. A security with a beta less than 1.0 is
2 considered less risky than the market.

3 There are computational problems surrounding beta. It depends on the
4 return data, the time period used, its duration, the choice of the market index, and
5 whether annual, monthly, or weekly return figures are used. Betas are estimated
6 with error. Based on empirical evidence, high betas will tend to have a positive
7 error (risk is overestimated) and low betas will have a negative error (risk is
8 underestimated).⁵

9 **Q. WHAT DID YOU USE AS THE PROXY OF THE BETA FOR BMSC?**

10 A. I used the average beta of the sample water utility companies. Betas were obtained
11 from *Value Line Investment Analyzer* (November 21, 2008). *Value Line* is the
12 source for estimated betas that Staff has used in a number of recent rate cases. The
13 average beta as shown on Schedule D-4.12 is 0.98. In the past few years, beta for
14 the sample water utility companies has increased significantly, indicating an
15 upward trend. For example, in the average beta for the water utility sample in
16 January 2006 was 0.74. The average beta increased to 0.85 by January 2007. I
17 should note that because BMSC is not publicly traded, BMSC has no beta. I
18 believe that BMSC, if it were publicly traded, would have a higher beta than the
19 sample water utility companies.

20 **Q. PLEASE EXPLAIN THE MARKET RISK PREMIUM?**

21 A. The market-risk premium ($R_m - R_f$) is the return an investor expects to receive as
22 compensation for market risk. It is the expected market return minus the risk-free
23 rate. Approaches for estimating the market risk premium can be historical or
24 prospective.

25 ⁵ Eugene F. Fama and Kenneth R. French, "The Capital Asset Pricing Model: Theory and
26 Evidence," *Journal of Economic Perspectives* (Summer 2004) 25-46.

1 Since expected returns are not directly observable, historical realized returns
2 are often used as a proxy for expected returns on the basis that the historical market
3 risk premium follows what is known in statistics as a "random walk." If the
4 historical risk premium does follow the random walk, then one should expect the
5 risk premium to remain at its historical mean. Based on this argument, the best
6 estimate of the future market risk premium is the historical mean. Morningstar's
7 *SBBI Valuation Edition 2008 Yearbook* provides historical market returns for
8 various asset classes from 1926 to 2007. This publication also provides market risk
9 premiums over U.S. Treasury bonds, which make it an excellent source for
10 historical market risk premiums.

11 Prospective market risk premium estimation approach necessarily
12 examining the returns expected from common equities and bonds. They can be
13 extremely volatile, especially when examining very short periods of time. When
14 such methods are shown to be volatile, they should be avoided. One method
15 employs applying the DCF model to a representative market index such as the S&P
16 500 index or the *Value Line* Composite Index. The expected return from the DCF
17 is measured for a number of periods of time, and then subtracted from the
18 prevailing risk-free rate for each period to arrive at market risk premium for each
19 period. The market risk premium subsequently employed in the CAPM is the
20 average market risk premium of the overall period.

21 **Q. HOW MANY MARKET RISK PREMIUM ESTIMATES DID YOU**
22 **PREPARE IN CONNECTION WITH YOUR ASSIGNMENT FOR BMSC?**

23 **A. I prepared two market risk premium estimates: An historical market risk premium**
24 **and a current market risk premium.**

1 Q. HOW DID YOU ESTIMATE THE HISTORICAL MARKET RISK
2 PREMIUM?

3 A. I used the Morningstar's *SBBI Valuation Edition 2008 Yearbook* measure of the
4 average premium of the market over intermediate-term treasury securities from
5 1926 through 2007. The average historical market risk premium over intermediate-
6 term treasury securities is 7.5 percent.

7 Q. HOW DID YOU ESTIMATE THE CURRENT MARKET RISK PREMIUM?

8 A. I derived a market risk premium by, first, using the DCF model to compute an
9 expected market return for each of the past 12 months using *Value Line's*
10 projections of the average dividend yield and average price appreciation (growth)
11 on the *Value Line* Composite Index. I then subtracted the average 30-year
12 Treasury yield for each month from the expected market returns to arrive at the
13 expected market risk premiums. Finally, I averaged the computed market risk
14 premiums to determine the current market risk premium. The data and
15 computations are shown on Schedule D-4.12. The average market risk premium is
16 16.04 percent.

17 Q. WHY DID YOU USE A FULL 12 MONTHS OF DATA TO ESTIMATE THE
18 EXPECTED MARKET RISK PREMIUM?

19 A. Staff typically computes a market risk premium based on a single point in time,
20 which makes estimates extremely volatile, so much so that the expected market
21 risk premium estimate can change by as much as 300 basis points (or more) each
22 time it is estimated. The accuracy of the expected risk premium is greatly
23 enhanced by increasing the number of periods used to estimate it. It is analogous
24 to flipping a coin. One cannot predict with any degree of accuracy the result of a
25 single flip of a balanced coin, or even a few. But the more coin flips, the greater
26 degree of confidence one has in predicting the outcome.

1 Q. WHY DID YOU USE THE 30-YEAR TREASURY AS OPPOSED TO THE 5,
2 7, OR EVEN 10 YEAR TREASURIES IN COMPUTING YOUR EXPECTED
3 MARKET RISK PREMIUMS?

4 A. To properly match the risk-free rate (based the 30-year Treasury rate) with the
5 expected market risk premium I used in the current market risk premium CAPM.

6 F. The Results of the DCF and CAPM Models, and Recommended ROE.

7 Q. PLEASE DISCUSS YOUR ANALYSIS OF THE COST OF EQUITY FOR
8 BMSC.

9 A. In the first part of my analysis, I applied two versions of the constant growth DCF
10 and a two-stage DCF models to the six water utilities in the sample group. The
11 DCF analyses appear on Schedules D-4.9, D-4.10, and D-4.11. The DCF models
12 produce an indicated equity cost in the range of 9.9 percent to 13.5 percent.

13 In the second part of my analysis, I applied two versions of the CAPM – an
14 historical risk premium CAPM and a current market risk premium CAPM. The
15 CAPM analyses appear on Schedule D-4.13 and produce an indicated cost of
16 equity in the range of 9.8 percent to 19.4 percent.

17 Q. PLEASE SUMMARIZE YOUR DCF AND CAPM RESULTS.

18 A. The following table summarizes the results of the models I have used:

	<u>Range</u>	<u>Midpoint</u>
DCF Constant Growth (earnings growth)	10.7% - 14.9%	12.8%
DCF Constant Growth (sustainable growth)	8.6% - 12.3%	10.4%
Two-Stage Growth Model	10.3% - 13.2%	11.7%
DCF Average Results	9.9% - 13.5%	11.7%
CAPM Historical MRP		9.8%
CAPM Current MRP		19.4%
Average CAPM Results	9.8%-19.4%	14.6%

1 **Average Overall Results** **9.8%-16.5%** **13.2%**

2 **Q. DOES THAT CONCLUDE YOUR DIRECT TESTIMONY?**

3 **A. Yes.**

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Black Mountain Sewer Corporation Application

**Direct Testimony Of Thomas J. Bourassa
(Cost of Capital)**

Exhibit 1

Black Mountain Sewer Corporation
Discounted Cash Flow Analysis (Water)
Market Price

Line No.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	Company	Projected Div	5 Year Historical Average Div. Growth	Recent Price	Compound Annual Price Growth	Year 5 Price	Recent Price	Year 1 Div	Year 2 Div	Year 3 Div	Year 4 Div	Year 5 Div + Price	Implied ROE = Internal Rate of Return (Cols 7-12)
1	1. American States	\$ 0.98	2.02%	\$ 31.32	13.68%	\$ 59.46	\$ (31.32)	\$ 0.98	\$ 1.00	\$ 1.02	\$ 1.04	\$ 60.52	16.2%
2	2. Aqua America	0.52	8.80%	20.57	13.72%	39.12	(20.57)	0.52	0.57	0.62	0.67	39.85	16.0%
3	3. California Water	1.17	0.71%	40.47	12.76%	73.78	(40.47)	1.17	1.27	1.39	1.51	75.30	15.4%
4	4. Connecticut Water	0.89	1.51%	20.60	1.91%	22.65	(20.60)	0.89	0.97	1.05	1.15	23.81	6.8%
5	5. Middlesex	0.71	1.94%	14.32	6.86%	19.95	(14.32)	0.71	0.77	0.84	0.91	20.88	11.9%
6	6. SJW Corp.	0.66	7.43%	23.93	24.69%	72.12	(23.93)	0.66	0.72	0.78	0.85	73.04	26.8%
14	GROUP AVERAGE												15.5%
15	GROUP MEDIAN												15.7%

Sources:
Value Line Data
Yahoo Finance November 21, 2008

Black Mountain Sewer Corporation Application

**Direct Testimony Of Thomas J. Bourassa
(Cost of Capital)**

Exhibit 2

**Black Mountain Sewer Corporation
Historical Compound Annual Total Market Returns**

Line No.	Company	3 Yr. Return	5 Yr. Return	10 Yr. Return
1	1. American States	19.08%	16.30%	19.95%
2	2. Aqua America	9.00%	15.84%	15.62%
3	3. California Water	5.58%	16.07%	9.20%
4	4. Connecticut Water	3.15%	5.38%	12.18%
5	5. Middlesex	6.97%	10.43%	13.15%
6	6. SJW Corp.	28.62%	26.51%	17.90%
7	Average	12.07%	15.09%	14.67%
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* 2005-2007
** 2003-2007
*** 1998-2007

Sources:
Value Line Data
Yahoo Finance

Black Mountain Sewer Corporation Application

**Direct Testimony Of Thomas J. Bourassa
(Cost of Capital)**

Exhibit 3

Black Mountain Sewer Corporation
Historical Compound Annual Capital Appreciation Returns

Exhibit 3

Witness: Bourassa

Line No.	Company	3 Yr.* Return	5 Yr.** Return	10 Yr.*** Return
1	1. American States	16.28%	13.68%	12.35%
2	2. Aqua America	6.81%	13.72%	13.87%
3	3. California Water	2.47%	12.76%	6.33%
4	4. Connecticut Water	-0.40%	1.91%	8.84%
5	5. Middlesex	3.35%	6.86%	9.88%
6	6. SJW Corp.	26.63%	24.69%	16.43%
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17	Average	9.19%	12.27%	11.28%
18				
19				
20				
21				
22				
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29				
30				

* 2005-2007
 ** 2003-2007
 *** 1998-2007

Sources:
 Value Line Data
 Yahoo Finance

Black Mountain Sewer Corporation Application

**Direct Testimony Of Thomas J. Bourassa
(Cost of Capital)**

Exhibit 4

Black Mountain Sewer Corporation
Discounted Cash Flow Analysis (Water)
Constant Growth DCF Model
Using Analyst Estimates of DPS Growth

Exhibit 4
 Witness: Bourassa

Line No.	(1)	(2)	(3)	(4)	(5)	(6)
	Company	Spot Price (Po)	Next Year's Div (D1)	Dividend Yield	Indicated Equity Cost k=Div Yld + G (Cols 1+4)	Indicated Equity Cost k=Div Yld + G (Cols 1+4)
1	1. American States	31.32	1.00	3.19%	7.7%	*
2	2. Aqua America	20.57	0.50	2.43%	9.9%	9.9%
3	3. California Water	40.47	1.17	2.89%	3.9%	*
4	4. Connecticut Water	20.60	0.89	4.30%	Not Available	
5	5. Middlesex	14.32	0.71	4.93%	Not Available	
6	6. SJW Corp.	23.93	0.66	2.74%	Not Available	
7						
8						
9						
10						
11						
12						
13						
14						
15	GROUP AVERAGE				7.2%	9.9%
16	GROUP MEDIAN				7.7%	9.9%
17						
18	Current Baa interest rate (November 20, 2008)				9.0%	
19						
20	Blue Chip Forecast Baa Corporate Bond Interest Rate 2011 Top 10				8.0%	
21	Blue Chip Forecast Baa Corporate Bond Interest Rate 2011 Bottom 10				6.8%	
22	Blue Chip Forecast Baa Corporate Bond Interest Rate 2011 Consensus				7.3%	
23						
24						
25						
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28						
29						
30						

* Indicated equity cost below current cost of debt (Baa) or negative growth.

Sources:

Value Line Analyzer Data September 2008
 Yahoo Finance November 21, 2008
 Federal Reserve October 16, 2008
 Blue Chip Financial Forecast June 2008

Black Mountain Sewer Corporation Application

**Direct Testimony Of Thomas J. Bourassa
(Cost of Capital)**

Exhibit 5

Black Mountain Sewer Corporation
Discounted Cash Flow Analysis (Water)
Constant Growth DCF Model - Historical
Using 5 Year Historical Dividend Growth

Exhibit 5

Witness: Bourassa

Line No.	(1)	(2)	(3)	(4)	(5)	(6)
	Company	Spot Price (Po)	Next Year's Div (D1)	Dividend Yield	Historical Div. Growth	Indicated Equity Cost k=Div Yld + G (Cols.1+4)
1	1. American States	31.32	1.00	3.19%	2.02%	*
2	2. Aqua America	20.57	0.50	2.43%	8.80%	11.2%
3	3. California Water	40.47	1.17	2.89%	0.71%	*
4	4. Connecticut Water	20.60	0.89	4.30%	1.51%	*
5	5. Middlesex	14.32	0.71	4.93%	1.94%	*
6	6. SJW Corp.	23.93	0.66	2.74%	7.43%	10.2%
7						
8						
9						
10						
11						
12						
13						
14						
15	GROUP AVERAGE				3.7%	10.7%
16	GROUP MEDIAN				4.1%	10.7%
17						
18	Current Baa interest rate (November 20, 2008)					9.0%
19						
20	Blue Chip Forecast Baa Corporate Bond Interest Rate 2011 Top 10					8.0%
21	Blue Chip Forecast Baa Corporate Bond Interest Rate 2011 Bottom 10					6.8%
22	Blue Chip Forecast Baa Corporate Bond Interest Rate 2011 Consensus					7.3%
23						

* Indicated equity cost below current cost of debt (Baa) or negative growth.

Sources:

Value Line Analyzer Data September 2008
 Yahoo Finance November 21, 2008
 Federal Reserve October 16, 2008
 Blue Chip Financial Forecast June 2008

Black Mountain Sewer Corporation Application

**Direct Testimony Of Thomas J. Bourassa
(Cost of Capital)**

Exhibit 6

Black Mountain Sewer Corporation
Discounted Cash Flow Analysis (Water)
Constant Growth DCF Model - Historical
Using 5 Year Historical EPS Growth

Exhibit 6

Witness: Bourassa

Line No.	(1)	(2)	(3)	(4)	(5)	(6)
	Company	Spot Price (Po)	Next Year's Div (D1)	Dividend Yield	Historical EPS Growth	Indicated Equity Cost k=Div Yld + G (Cols 1+4)
1	1. American States	31.32	1.00	3.19%	8.22%	11.4%
2	2. Aqua America	20.57	0.50	2.43%	5.76%	*
3	3. California Water	40.47	1.17	2.89%	4.25%	*
4	4. Connecticut Water	20.60	0.89	4.30%	Negative	NM
5	5. Middlesex	14.32	0.71	4.93%	4.42%	9.4%
6	6. SJW Corp.	23.93	0.66	2.74%	6.93%	9.7%
7						
8						
9						
10						
11						
12						
13						
14						
15	GROUP AVERAGE				5.9%	10.1%
16	GROUP MEDIAN				5.8%	9.7%
17						
18	Current Baa interest rate (November 20, 2008)					9.0%
19						
20	Blue Chip Forecast Baa Corporate Bond Interest Rate 2011 Top 10					8.0%
21	Blue Chip Forecast Baa Corporate Bond Interest Rate 2011 Bottom 10					6.8%
22	Blue Chip Forecast Baa Corporate Bond Interest Rate 2011 Consensus					7.3%
23						

* Indicated equity cost below current cost of debt (Baa) or negative growth.

Sources:

Value Line Analyzer Data September 2008
Yahoo Finance November 21, 2008
Federal Reserve October 16, 2008
Blue Chip Financial Forecast June 2008

Black Mountain Sewer Corporation Application

**Direct Testimony Of Thomas J. Bourassa
(Cost of Capital)**

Exhibit 7

November 7, 2008

Assessing U.S. Utility Regulatory Environments

Primary Credit Analyst:

Todd A Shipman, CFA, New York (1) 212-438-7676; todd_shipman@standardandpoors.com

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Assessing U.S. Utility Regulatory Environments

The assessment of regulatory risk is perhaps the most important factor in Standard & Poor's Ratings Services' analysis of a U.S. regulated, investor-owned utility's business risk. Each of the other four factors we examine--markets, operations, competitiveness, and management--can affect the quality of the regulation a utility experiences, but we believe the fundamental regulatory environment in the jurisdictions in which a utility operates often influences credit quality the most. In our credit analysis, we evaluate regulatory risk on a company-specific basis. A utility management's skill in managing regulatory risk can in many cases overcome a difficult regulatory environment. Conversely, other companies can experience greater regulatory risk even with supportive regulatory regimes if management fails to devote the necessary time and resources to the important task of managing regulatory risk. Operating in a state with a regulatory structure that is conducive to maintaining credit quality will improve the chances for a utility to successfully negotiate the regulatory maze.

This commentary discusses our views on what constitutes a favorable regulatory climate. We then use those factors to create assessments of the regulatory environments in states that regulate the electric and gas utilities that we rate. (See the table at the end of this article.) Our intention is to provide a common base for our own analysis of regulatory risk and to better communicate to investors, issuers, and regulators how various elements of regulation can affect credit quality. The exercise is also expected to enhance our ability to evaluate management by highlighting instances where our opinion of a company's regulatory risk diverges significantly from the fundamental quality of the regulatory jurisdictions where it operates.

The assessments of relevant jurisdictions are based on quantitative and qualitative factors. Importantly, we make our assessments from a credit perspective. We plan to update them annually or when significant events occur that have an important impact on the regulatory climate in a particular jurisdiction. The new regulatory assessment information augments the methodology applied to regulated utilities today.

Our introduction of these regulatory assessments coincides with what we view as the increasing influence of regulatory matters on the rated utilities' risk profiles and greater credit market awareness of the importance of understanding the regulatory process. Our goal in explaining our views on regulatory practices and policies and their effect on Standard & Poor's analysis of the credit quality of utilities is to provide additional transparency to the market.

Background

State utility regulation is almost as old as credit ratings. Standard & Poor's predecessor, Standard Statistics Bureau, was formed in 1906, and the first state utility commissions, as we know them today, appeared in 1907. Regulation has always been a factor in Standard & Poor's analysis of utility ratings, but its importance to our analysis has shifted with industry trends over time.

Before the 1970s, regulators presided for the most part over stable or decreasing rates as economic growth, rising consumption, and economies of scale drove costs down. The advent of inflation, rising and volatile fuel costs, and nuclear power missteps led to higher rates and, in our view, greater regulatory influence on credit quality during the 1980s. Restructuring in the natural gas and then the electric industries marked the 1990s and the first years of the new millennium, and the importance of regulatory issues in our analysis again started to subside. In our view, we are

now in another era of increasing and unstable costs and some semblance of a return to traditional utility regulation. Consequently, the quality of regulation is at the forefront of our analysis of utility creditworthiness.

We have historically focused on regulatory risk on a company-specific basis. Nothing in what follows will change that approach. Utility commissions regulate diverse industries and adopt different approaches to different types of businesses. Treatment of utilities within the same industry can vary significantly in the same jurisdiction. The quality of the regulation experienced by a company is often the product of the company's management and business strategy as much as its regulators. The regulatory climate assessments only serve as a baseline of our opinion on the fundamental attitude of a jurisdiction toward the credit quality of the utilities in that state, and they are the starting point for Standard & Poor's analysis of the regulatory risk of each rated utility. Our goal is to achieve greater consistency and continuity in utility ratings.

Assessing Regulatory Jurisdictions

We assess jurisdictions on one basic attribute--the fundamental approach to controlling utility rates--and then in three major categories. The resulting assessments are based primarily on various measures of regulatory risk that are discussed briefly below. With respect to qualitative factors, we look for long-term, historical characteristics of the jurisdiction, as well as transient regulatory and political developments.

The foundation of our opinion of the regulation in a jurisdiction is the degree to which competitive market forces are allowed to influence rates. In order of credit-friendliness, a state will rely either on full cost-based regulation for all components of the utility bill, market-based mechanisms for generation, and (more rarely) retail markets, or a hybrid of the two to control the amount charged and the terms on which that service is offered. It may surprise some to learn that we consider a hybrid setup, which in most cases exists because the transition to some sort of competition has stalled, to harbor more risk for bondholders than a system that is committed to letting market prices set a major part of the customer's bill.

The risk inherent in the market-based model is straightforward: the price for electricity can be more volatile when based on a market than when it is based on embedded costs, and regulators are apt to resist full and timely recovery when changes in generation costs are abrupt and substantial (and perhaps misunderstood). The risks in a hybrid or transitional model are less apparent, but, in our opinion, potentially more significant. First, we consider the uncertainty of the timing of reaching the end state--and what that end state will look like--to be a negative factor from a credit perspective. Second, in some cases, the hybrid model may result in a "lower-of-cost-or-market" approach that allows generation rates to reflect one or the other at different times depending on which one suits ratepayers best. A utility and its bondholders may then face a prolonged period of potential exposure to market risk (the downside) with little or no opportunity to participate in the benefits of competition (the upside of greater returns).

After identifying the fundamental regulatory paradigm, our analysis turns to factors that influence the utility's business risk climate in the jurisdiction. The factors fall into three broad categories: ratemaking, political environment, and financial stability. Broadly speaking, the ratemaking and financial stability factors influence our assessments more than the paradigm and political factors.

Ratemaking Practices And Procedures

The main, and often the most contentious, task of a regulator is to set the rates a utility may charge its customers. We analyze specific rate decisions as part of the surveillance of each utility. Our regulatory assessments focus on the jurisdiction's overall approach to setting rates and the process it uses to conduct and manage base rate filings. Practices pertaining to separate tariff clauses for large expense items are examined in the third category of the analysis (see below). In this part of the assessment, we concentrate on whether established base rates fairly reflect the cost structure of a utility and allow management an opportunity to earn a compensatory return that provides bondholders with a financial cushion that promotes credit quality.

Notably, the analysis does not revolve around "authorized" returns, but rather on actual earned returns. We note the many examples of utilities with healthy authorized returns that, we believe, have no meaningful expectation of actually earning that return because of rate case lag, expense disallowances, etc. Although, in general, the absolute level of financial returns is less important to our analysis than how that return is earned, we recognize that, all else being equal, higher earned returns translate into better credit metrics and a more comfortable equity cushion for bondholders. A regulatory approach that allows utilities the opportunity to consistently earn a reasonable return is a positive factor in our view of credit quality.

The rates of return and capital structures used to generate the revenue requirement in rate proceedings may not be the primary focus of the assessment, but those and other decisions made in the ratemaking process are still noted. We consider those decisions to be potential signals from regulators on their attitude toward credit quality. We believe that the capital structure in particular is a handy and direct indication from the regulator as to whether or not creditworthiness is an important consideration in its deliberations when setting rates. Obviously, any pronouncements from a regulator that explicitly address credit ratings or ratemaking practices that incorporate credit-minded adjustments (e.g., the use of double-leveraged capital structures or off-balance-sheet debt-like obligations) are considered in the Standard & Poor's assessment.

We analyze the issue of "regulatory lag" in a comprehensive manner and not just as a matter of the efficiency of the regulator in completing rate cases. As part of this analysis, we evaluate the timeliness of rate decisions, coupled with an evaluation of the test year. In addition, we take into account the timing of interim rates, and other practices that affect the appropriateness of rates periodically established by the regulator. We do not view the issue of regulatory lag as an intermittent concern, consequential only during times of acute inflation or rising capital spending, but as a consistent part of our credit analysis. Accordingly, in our regulatory assessments we focus on whether the regulator efficiently prosecutes rate requests and bases its decisions with respect to rate setting on the most current information.

In our view, the prevalence of rate case settlements is not necessarily an important credit consideration. Although the common assumption among market participants seems to be that a settlement must be in the best interest of a utility, we believe this assumption disregards the possibility that management will sometimes make decisions based on its effect on earnings at the expense of cash flow considerations. This does not mean we dismiss the ability of stipulations to reach a fair resolution of difficult matters that help regulators issue timely and constructive rate decisions. It just means that frequent settlements do not, in our view, directly lead to a conclusion that the regulatory environment in a state enhances credit quality.

An important policy-related issue outside of individual rate cases that falls under this part of the assessment is the

regulatory oversight of large capital projects with long lead times that carry out-sized risks to a utility and its bondholders. In our opinion, practices such as legislative or regulatory recognition of the need for pre-approval of such endeavors, periodic reviews that substantively involve the regulator in the progress of the project, and rolling prudence determinations during construction can reduce the general level of risk associated with a utility committing substantial capital well in advance of the rate proceeding that results in the project being placed into rate base. Before committing to such projects, a resource-procurement process that uses objective guidelines to evaluate competing proposals to meet load obligations and keeps the regulator informed and involved in the decisions can, in our view, help to reduce the risk of subsequent disallowances. If the jurisdiction has an Integrated Resource Plan or similar mechanism that includes the participation of many parties and is used to definitively establish the need for new generation, we consider credit risk to be further diminished.

One more factor that we examine in this part of the analysis is whether a jurisdiction employs nontraditional ratemaking practices. Examples of what we may view to be potentially credit-enhancing regulatory mechanisms include weather normalization and incentive ratemaking. We believe that the beneficial effect on credit quality of a tariff clause that smooths out cash flows that can vary with outside influences like weather is self evident. The benefits of incentives incorporated into the regulatory regime may be less clear. Well-designed incentives can be at least credit neutral. A moderate amount of incentives can be credit supportive. We generally view incentive provisions (whether tied to cost control, reliability, or operational performance) as being beneficial for credit quality if they are linked to fair and objective benchmarks. Incentives that lack some or all of those features, such as a plain, long-term rate freeze, can be, in our opinion, detrimental to credit quality.

Political Insulation

The role of politics in utility regulation is often misunderstood. In most jurisdictions, legislatures created regulatory commissions and invested them with the power to set and enforce utility rates and service standards. Regardless of how a regulatory commission is statutorily organized, its function is to set and regulate rates and service standards with due regard not only for the interests of those who advance the capital needed to provide safe and reliable utility service but for other constituents as well. In this regard, bondholders should recognize that the setting of utility rates invariably reflects political as well as economic factors. Therefore, the potential for political considerations to affect utility regulation can be a key determinant when we assess a regulatory jurisdiction.

A primary factor in this part of our assessment is the method of selecting utility commissioners. In some jurisdictions, the governors appoint regulatory commissioners. In others, the same voters who pay utility bills directly elect commissioners. The regulatory risk associated with that model can sometimes be managed, but there is an inherent level of risk in elected regulatory bodies that we reflect in the assessment. Standard & Poor's also analyzes the track record of the involvement of the executive branch or the legislature in utility matters, and the relative visibility of utility issues in the political arena.

The ability of a regulator to deliver sound, fair, and timely rate decisions and set prudent regulatory policies that assist utility managers in managing business and financial risk can be affected by the overall atmosphere that it operates in. The tone can be set by the governor or legislature, the history and tradition of independence accorded to the regulatory body, and the behavior of important constituent groups that intervene in utility proceedings.

Cash Flow Support And Stability

The final set of factors in our assessment of regulatory environments is arguably the most important. The phrase "cash is king" can be overused, but it does highlight an essential part of the credit analysis. A regulatory jurisdiction that recognizes the significance of cash flow in its decision making is one that will appeal to bondholders. Generating cash is a function of the actions of utility management, but the regulator can supply (or withhold) the tools that can affect the company's essential ability to actually realize the intended level of cash flow.

The most prominent factor in this part of the analysis is the application of separate tariff provisions for major expenses such as fuel and purchased power. The timely adjustment of rates in response to changing commodity prices and other expenses that are largely out of the control of utility management is a key component of a credit-enhancing regulatory jurisdiction. We analyze the quality of special tariff mechanisms to determine their effectiveness in producing the cash flow stability they are designed to achieve. The frequency of rate adjustments, the ability to quickly react to unusual market volatility, and the control of opportunities to engage in hindsight disallowances of costs could affect the analysis almost as much as whether the tariff provisions exist at all. The record of disallowances plays a part in the regulatory assessment.

The commission's policies and oversight covering hedging activities may also be a factor in this part of the review if a utility has sought regulatory approval. For utilities that attempt to manage commodity risks, we look for a clearly-stated hedging policy and a track record of activity that conforms to that policy. The responsibility for communicating the policy and demonstrating the prudence of the hedging activity rests with the utility, but the initial response to a hedging program and the history of the regulator's treatment of the results of the program could influence our assessment.

Regulators can employ other ratemaking techniques that promote stable cash flows. We consider a commission's decisions on rate design in assessing its attitude on credit quality. For example, we take into account the relative size of the typical monthly customer charge, a decoupling mechanism that severs the direct relationship between revenues and customer usage, or other rate design features that bolster credit quality.

Especially during upswings in the capital expenditure cycle, such as we are experiencing now, a jurisdiction's willingness to support large capital projects with cash during the construction phase is an important aspect of our analysis. This is especially true for ventures with big budgets and long lead times, such as baseload coal-fired or nuclear power plants and high-voltage transmission lines that are susceptible to construction delays. Allowance of a cash return on construction work-in-progress or similar ratemaking methods historically were considered extraordinary measures for use in unusual circumstances, but in today's environment of rising construction costs and possible inflationary pressures, cash flow support could be crucial in maintaining credit quality through the spending program.

Jurisdictional Assessments

The table below shows Standard & Poor's assessments of regulatory jurisdictions. The category titles are designed to communicate one other important point regarding utility regulation and its effect on ratings. All categories are denoted as "credit-supportive". To one degree or another, all U.S. utility regulation sustains credit quality when compared with the rest of corporate ratings at Standard & Poor's. The presence of regulators, no matter where in

the spectrum of our assessments, reduces business risk and generally supports all U.S. utility ratings.

Regulatory Jurisdictions For Utilities Among U.S. States				
Most credit supportive	More credit supportive	Credit supportive	Less credit supportive	Least credit supportive
	Alabama	Arkansas	Louisiana	Arizona
	California	Colorado	Maine	Delaware
	Florida	Connecticut	Missouri	Dist. of Columbia
	Georgia	Hawaii	Montana	Illinois
	Indiana	Idaho	New York	Maryland
	Iowa	Kansas	Oklahoma	New Mexico
	South Carolina	Kentucky	Rhode Island	
	Wisconsin	Massachusetts	Texas	
		Michigan	Utah	
		Minnesota	Vermont	
		Mississippi	Washington	
		Nevada	West Virginia	
		New Hampshire	Wyoming	
		New Jersey		
		North Carolina		
		North Dakota		
		Ohio		
		Oregon		
		Pennsylvania		
		South Dakota		
		Virginia		

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Black Mountain Sewer Corporation Application

**Direct Testimony Of Thomas J. Bourassa
(Cost of Capital)**

Schedules

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Summary of Cost of Capital

Exhibit
Schedule D-1
Page 1
Witness: Bourassa

Line
No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

		<u>End of Test Year</u>		<u>End of Projected Year</u>	
		Dollar Amount	Percent of Total	Cost Rate	Weighted Cost
Item of Capital					
Long-Term Debt ¹		-	0.00%	9.40%	0.00%
Stockholder's Equity ²		4,214,556	100.00%	12.80%	12.80%
Totals		\$ 4,214,556	100.00%		12.80%

¹ Excluded long-term debt for Scottsdale Treatment Capacity
² Adjusted for correction to accumulated depreciation of
³ Adjusted for deferred income taxes

SUPPORTING SCHEDULES:

D-1
D-3
D-4
E-1

RECAP SCHEDULES:
A-3

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Cost of Long Term Debt

Exhibit
Schedule D-2
Page 1
Witness: Bourassa

Line No.	Description of Debt	End of Test Year			End of Projected Year		
		Amount Outstanding	Annual Interest	Interest Rate	Weighted Cost	Amount Outstanding	Annual Interest
1	Loan for Scottsdale Treatment Capacity	659,546	74,518	9.40%	6.13%	613,181	71,388
2	Loan for Scottsdale Treatment Capacity	351,103	39,325	9.40%	3.27%	327,694	36,010
3		-	-	0.00%	0.00%	-	-
4		-	-	0.00%	0.00%	-	-
5							
6							
7							
8							
9							
10							
11							
12							
13	Totals						
14							
15	Supporting Schedules:						
16	E-2						
17							
18							
19							
20							
21							
		\$ 1,010,649	\$ 113,843		9.40%	\$ 940,875	\$ 107,398
							9.40%

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Cost of Preferred Stock

Exhibit
Schedule D-3
Page 1
Witness: Bourassa

Line No.	Description of Issue	<u>End of Test Year</u>			<u>End of Projected Year</u>		
		Shares Outstanding	Amount	Dividend Requirement	Shares Outstanding	Amount	Dividend Requirement
1							
2							
3	NOT APPLICABLE, NO PREFERRED STOCK ISSUED OR OUTSTANDING						
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17	<u>SUPPORTING SCHEDULES:</u>				<u>RECAP SCHEDULES:</u>		
18	E-1				D-1		
19							
20							

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Cost of Common Equity

Exhibit
Schedule D-4
Page 1
Witness: Bourassa

Line

No.

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The Company is proposing a cost of common equity of 12.8%.

SUPPORTING SCHEDULES:

E-1

D-4.0 to D-4.13

RECAP SCHEDULES:

D-1

Black Mountain Sewer Corporation
Summary of Results

Exhibit
Schedule D-4.0
Witness: Bourassa

Line No.	Method	Low	High	Midpoint
1				
2				
3				
4				
5	DCF Constant Growth	10.7%	14.9%	12.8%
6	DCF Sustainable Growth	8.6%	12.3%	10.4%
7	DCF Two-Stage	10.3%	13.2%	11.8%
8				
9	Average DCF Results	9.9%	13.5%	11.7%
10				
11	CAPM	9.9%	19.4%	14.7%
12				
13	Average DCF and CAPM Results	9.9%	16.5%	13.2%
14				
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**Black Mountain Sewer Corporation
Selected Characteristics of Water Utilities**

Exhibit
Schedule D-4.1
Witness: Bourassa

Line No.	Company	% Water Revenues	Operating Revenues (millions)	Net Plant (millions)	S&P Bond Rating	Moody's Bond Rating
1	1. American States	82%	\$ 299.1	\$ 701.8	NR	A2
2	2. Aqua America	87%	\$ 604.6	\$ 2,466.5	AA-	NR
3	3. California Water	97%	\$ 378.2	\$ 929.5	NR	NR
4	4. Connecticut Water	85%	\$ 61.3	\$ 239.2	AAA	NR
5	5. Middlesex	90%	\$ 89.3	\$ 307.2	A	NR
6	6. SJW Corp.	95%	\$ 213.8	\$ 476.8	NR	NR
7						
8						
9						
10						
11	Average	89%	\$ 274.4	\$ 853.5		
12						
13	Black Mountain Sewer Corporation	0%	\$ 1.6	\$ 5.7	NR	NR
14						
15						
16						
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28						

Source: AUS Utility Reports (November 2008)

**Black Mountain Sewer Corporation
Capital Structures of Water Utilities**

Exhibit
Schedule D-4.2
Witness: Bourassa

<u>No.</u>	<u>Company</u>	<u>Book Value</u>		<u>Market Value</u>	
		<u>Long-Term Debt</u>	<u>Common Equity</u>	<u>Long-Term Debt</u>	<u>Common Equity</u>
1	1. American States	47.0%	53.0%	33.2%	66.8%
2	2. Aqua America	55.4%	44.6%	30.7%	69.3%
3	3. California Water	43.0%	57.0%	25.6%	74.4%
4	4. Connecticut Water	47.9%	52.1%	34.7%	65.3%
5	5. Middlesex	49.8%	50.2%	40.5%	59.5%
6	6. SJW Corp.	47.7%	52.3%	33.0%	67.0%
7	Average	48.5%	51.5%	32.9%	67.1%
8	Black Mountain Sewer Corporation	19.3%	80.7%	N/A	N/A

Source: Value Line Analyzer Data (November 21, 2008)

Black Mountain Sewer Corporation
Comparisons of Past and Future Estimates of Growth

Exhibit
Schedule D-4.3
Page 1
Witness: Bourassa

Line No.	Company	Five-year historical compound annual changes				Average Future Growth ¹
		Price	Value	DPS	EPS	
1	1. American States	13.68%	4.53%	1.99%	6.53%	8.50%
2	2. Aqua America	13.72%	9.84%	8.45%	5.63%	8.00%
3	3. California Water	12.76%	7.11%	0.70%	3.71%	8.67%
4	4. Connecticut Water	1.91%	3.50%	1.51%	Negative	9.03%
5	5. Middlesex	6.86%	6.34%	1.93%	3.57%	8.00%
6	6. SJW Corp.	24.69%	8.96%	7.24%	5.92%	12.00%
7						
8						
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10						
11						
12						
13						
14						
15	GROUP AVERAGE	12.27%	6.71%	3.64%	5.07%	9.03%
16	GROUP MEDIAN	13.22%	6.73%	1.96%	5.63%	8.58%
17						
18						
19						
20						
21	Sources:					
22	Value Line Data					
23	Yahoo Finance					
24						
25						
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¹ See Schedule D-4.5

Black Mountain Sewer Corporation
Comparisons of Past and Future Estimates of Growth

Exhibit
Schedule D-4.4
Page 1
Witness: Bourassa

Line No.	Company	<u>Ten-year historical compound annual changes</u>				Average Future Growth ¹
		Price	Book Value	DPS	EPS	
1	1. American States	12.35%	4.54%	1.47%	4.53%	8.50%
2	2. Aqua America	13.87%	9.39%	7.18%	7.64%	8.00%
3	3. California Water	6.33%	3.59%	0.91%	Negative	8.67%
4	4. Connecticut Water	8.84%	3.76%	1.26%	1.08%	9.03%
5	5. Middlesex	9.88%	3.98%	1.98%	2.65%	8.00%
6	6. SJW Corp.	16.43%	4.85%	5.13%	2.66%	12.00%
7						
8						
9						
10						
11						
12						
13						
14						
15	GROUP AVERAGE	11.28%	5.02%	2.99%	3.71%	9.03%
16	GROUP MEDIAN	11.12%	4.26%	1.72%	2.66%	8.58%
17						

¹ See Schedule D-4.5

Sources:
Value Line Data
Yahoo Finance

Line
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Black Mountain Sewer Corporation
Analysts Forecasts of Earnings Per Share Growth

Exhibit
Schedule D-4.5
Witness: Bourassa

Line No.	(1)	(2)	EPS GROWTH		Value Line	Average Growth (G) (Cols 1-3)
			Zacks	Morningstar		
1						
2						
3						
4						
5						
6						
7			12.00%	7.00%	11.00%	8.50%
8			9.00%	7.50%	7.50%	8.00%
9			9.00%	8.00%	10.00%	8.67%
10						9.03%
11			8.00%		8.00%	8.00%
12			10.00%	18.00%	10.00%	12.00%
13						
14						
15			9.60%	10.13%	9.30%	9.03%
16						8.58%
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Sources:

Value Line Investment Analyzer Data November 21, 2008
Zacks Investment Research Site November 21, 2008
Morningstar Website November 21, 2008
Yahoo Finance November 21, 2008

Exhibit
Schedule D-4.6
Witness: Bourassa

Sources:
Value Li

Black Mountain Sewer Corporation
Estimates of sv Growth

Exhibit
Schedule D-4.7
Witness: Bourassa

Line No.	(1)	(2)	(3)	(4)
	Stock Financing Rate	Current Market to Book Ratio	y	sv Growth
1. American States	2.03%	1.78	0.44	0.89%
2. Aqua America	1.03%	2.81	0.64	0.67%
3. California Water	4.87%	2.20	0.55	2.66%
4. Connecticut Water				na
5. Middlesex				na
6. SJW Corp.				na
7				
8				
9				
10				
11				
12				
13				
14				
15	2.65%	2.26	0.54	1.40%
16	2.03%	2.20	0.55	0.89%
17				
18				
19				
20				
21				

Sources:
Value Line Data

Black Mountain Sewer Corporation
Discounted Cash Flow Analysis (Water)
Constant Growth DCF Model
Using Projected EPS Growth

Exhibit
 Schedule D-4.8
 Witness: Bourassa

Line No.	(1)	(2)	(3)	(4)	(5)
	Company	Spot Price (Po)	Next Year's Div (D1)	Dividend Yield	Indicated Cost of Equity k=Div Yld + g (Cols 3+4)
1	1. American States	31.32	1.08	3.45%	11.9%
2	2. Aqua America	20.57	0.56	2.72%	10.7%
3	3. California Water	40.47	1.18	2.92%	11.6%
4	4. Connecticut Water	20.60	0.90	4.37%	13.4%
5	5. Middlesex	14.32	0.72	5.03%	13.0%
6	6. SJW Corp.	23.93	0.70	2.94%	14.9%
7					
8					
9					
10					
11					
12					
13					
14					
15	GROUP AVERAGE			3.57%	12.6%
16	GROUP MEDIAN				12.5%
17					
18					
19					
20					
21					
22					
23					

¹ See Schedules D-4.5

Sources:
 Value Line Investment Analyzer Data November 21, 2008
 Yahoo Finance November 21, 2008

Black Mountain Sewer Corporation
Discounted Cash Flow Analysis (Water)
Constant Growth DCF Model - Sustainable Growth

Exhibit
Schedule D-4.9
Witness: Bourassa

Line No.	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Company	Spot Price (Po)	Next Year's Div (D1)	Dividend Yield	Sustainable Growth ¹		Indicated Cost of Equity
					br	vs Growth (g)	k=Div Yld + g (Cols 3+6)
1	1. American States	31.32	1.08	3.45%	7.02%	0.89%	11.4%
2	2. Aqua America	20.57	0.56	2.72%	5.20%	0.67%	8.6%
3	3. California Water	40.47	1.18	2.92%	5.34%	2.66%	10.9%
4	4. Connecticut Water	20.60	0.90	4.37%		7.26%	11.6%
5	5. Middlesex	14.32	0.72	5.03%		7.26%	12.3%
6	6. SJW Corp.	23.93	0.70	2.94%		7.26%	10.2%
7							
8							
9							
10							
11							
12							
13							
14							
15	GROUP AVERAGE			3.57%		7.26%	10.8%
16	GROUP MEDIAN						11.1%
17							
18							
19							
20							
21							
22							
23							
24							

¹ See Schedule D-4.6 and D-4.7

Sources:

Value Line Investment Analyzer Data November 21, 2008
Yahoo Finance November 21, 2008

Black Mountain Sewer Corporation
Discounted Cash Flow Analysis (Water)
Two-Stage Growth - Projected

Exhibit
Schedule D-4.10
Witness: Bourassa

Line No.	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							

¹ See Schedule D-4.5

² Near term growth given weighting of .67

Black Mountain Sewer Corporation
Market Betas

Exhibit
Schedule D-4.11
Witness: Bourassa

Line No.	Company	
1	American States	0.95
2	Aqua America	1.00
3	California Water	1.10
4	Connecticut Water	0.80
5	Middlesex	0.90
6	SJW Corp.	1.15
8	Average	0.98
10	Source:	
11	Value Line Investment Analyzer Data November 21, 2008	
12		
13		
14		
15		
16		

Black Mountain Sewer Corporation
Test Year Ended June 30, 2008
Capital Asset Pricing Model (CAPM)

Exhibit
Schedule D-4.13
Witness: Bourassa

Line No.	Rf	+	beta ³	x	Rp	=	k
1							
2							
3	2.6%	+	0.98	x	7.5% ⁴	=	9.9%
4							
5	3.7%	+	0.98	x	16.0% ⁵	=	19.4%
6							
7							
8							14.7%
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

¹ Federal Reserve November 21, 2008 average of 5, 7 and 10 year Treasury rates (Rf)

² Federal Reserve November 21, 2008 30 year Treasury rate (Rf)

³ Value Line Investment Analyzer data. See Schedule D-4.11

⁴ Historical Market Risk Premium from (Rp) MorningStar S&P 500 2008 Yearbook Table A-2 Intermediate-Horizon ERP 1926-2007

⁵ Computed using DCF constant growth method to determine current market return on Value Line 1700 stocks and CAPM with beta of 1.0 to compute Current Market Risk Premium (Rp). See Schedule D-4.12.